DOCUMENT RESUME

ED 061 002 88 RC 006 048

AUTHOR Brook, Weston L., Comp.; And Others
TITLE Pima Cultural Background Materials for an Elementary and Secondary Education Act Title III Project.
INSTITUTION Arizona State Univ., Tempe. Bureau of Educational Research and Services.; Bureau of Indian Affairs (Dept. of Interior), Sacaton, Ariz. Pima Indian Agency.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Projects to Advance Creativity in Education.
PUB DATE May 70
NOTE 108p.
AVAILABLE FROM Bureau of Educational Research and Services, Arizona State University, Tempe, Arizona 85281 ($5.00 in Xeroxed form)

EDRS PRICE MF-$0.65 HC-$6.58
DESCRIPTORS Agriculture; *American Indians; Art; *Cultural Awareness; Handicrafts; *History; *Instructional Materials; Learning Activities; Religion; *Teaching Guides
IDENTIFIERS Pimas

ABSTRACT

Produced with funds under Title III of the Elementary and Secondary Education Act, this unit on Pima cultural background and Middle American civilization was designed to help Pima students achieve a sense of identity and pride in their Indian background by (1) thinking of themselves as a people with a long history and (2) learning that their culture is part of Indian civilization. It is noted that this unit, which supplements the study of Ancient History, is divided into 4 parts: Prehistory, which includes a discussion of the development of agriculture; The Mayas, which discusses intellectual contributions in astronomy, mathematics, writing, and art; People of the Valley of Mexico, which describes their organized way of life (e.g., large irrigation projects, cities, armies, and empires); and The Hohokam, which describes the prehistoric people of Arizona. The unit contains both a student booklet and a teaching guide for each of the 4 parts. A bibliography is also provided for each part of the unit, and student booklets, slides, transparencies, and movies are cited. (PS)

ED 061002

PIMA CULTURAL BACKGROUND

AND

MIDDLE AMERICAN CIVILIZATION

RECEIVED
JAN 6 1971
NMSU
E.R.I.C.

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

RC 006 048

RECEIVED
JAN 6 1971
NMSU
E.R.I.C.

This material was produced by

Arizona State University

Bureau of Educational Research and Services

Merwin Deever, Director

In cooperation with

The Bureau of Indian Affairs

Pima Agency, Branch of Education

John R. O'Brien, Administrator

Under Public Law 89-10, Title III, Project No. 68-65-16 of the U. S. Office of Education. Permission to reprint and distribute this material is hereby granted provided that: a) it will not be placed on sale, and b) proper acknowledgement is made to the author and the producers.

PIMA CULTURAL BACKGROUND MATERIALS

for an

Elementary and Secondary Education Act Title III Project

Compiled and Edited

By

Weston L. Brook
Project Coordinator
Tom Buchanan
Project Director
and
Jean H. Cole
Research Associate

Adelaide Bahr
Anthropological Consultant

Cnusak Prescott
Art Consultant

for

Bureau of Educational Research and Services
Arizona State University, Tempe

May, 1970

PIMA CULTURAL BACKGROUND

and

Middle American Civilization

Purposes

The purposes of this unit are to help the Pima students achieve a sense of identity and pride in their Indian background by: 1) thinking of themselves as a people with a long history; and 2) learning that their culture is part of one of mankind's great achievements, Indian Civilization.

In order to stress these purposes where appropriate, keep in mind three major points: 1) Indians have a history; 2) this history culminated in an advanced form of civilization; 3) this civilization was uniquely Indian in character.

This unit supplements the study of Ancient History and should accompany or come soon after the study of Prehistory and/or Ancient History in the Old World.

Outline

This unit is divided into four parts.

1. Prehistory. This is an account of early history, primarily in America and includes the importance of the development of agriculture as a means toward a development of a higher civilization.
2. The Mayas. This group of Indians made great intellectual contributions in astronomy, mathematics, writing, and art.
3. The People of the Valley of Mexico. This section describes a series of tribes that developed a very organized way of life which included large irrigation projects, cities, armies, and later, empires.
4. The Hohokam. These were the prehistoric people of Arizona who were

greatly influenced by the civilizations of Mexico. These Indians, who were forerunners of the Pimas, Papagos and other tribes, shared many of the ideas of the more highly civilized Indian cultures, yet preferred a less complex way of life.

The Student Booklet

Textbooks or source books on these topics are not easily available. Thus, the included booklets provide necessary information unavailable from other sources.

Slides and Transparencies

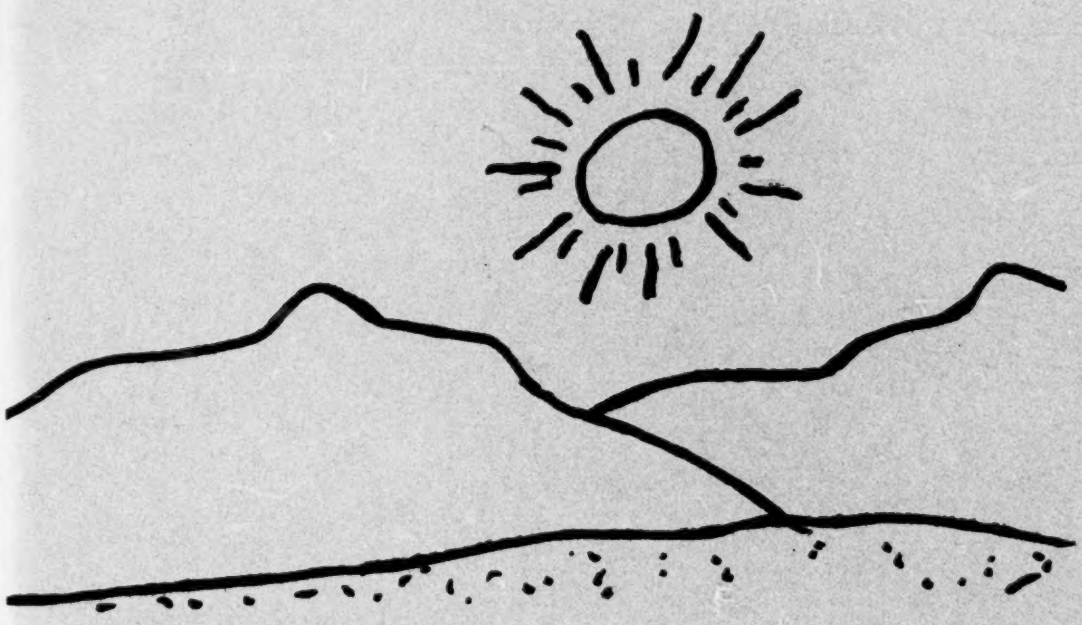
Slide and transparency numbers suggested for particular areas of the teaching unit are not mandatory, but may be used throughout the unit at the discretion of the individual teacher.

Movies

The use of movies, generally at the end of a unit, are available through the Central Arizona Film Cooperative and may be used at the discretion of the teacher.

Adelaide Bahr

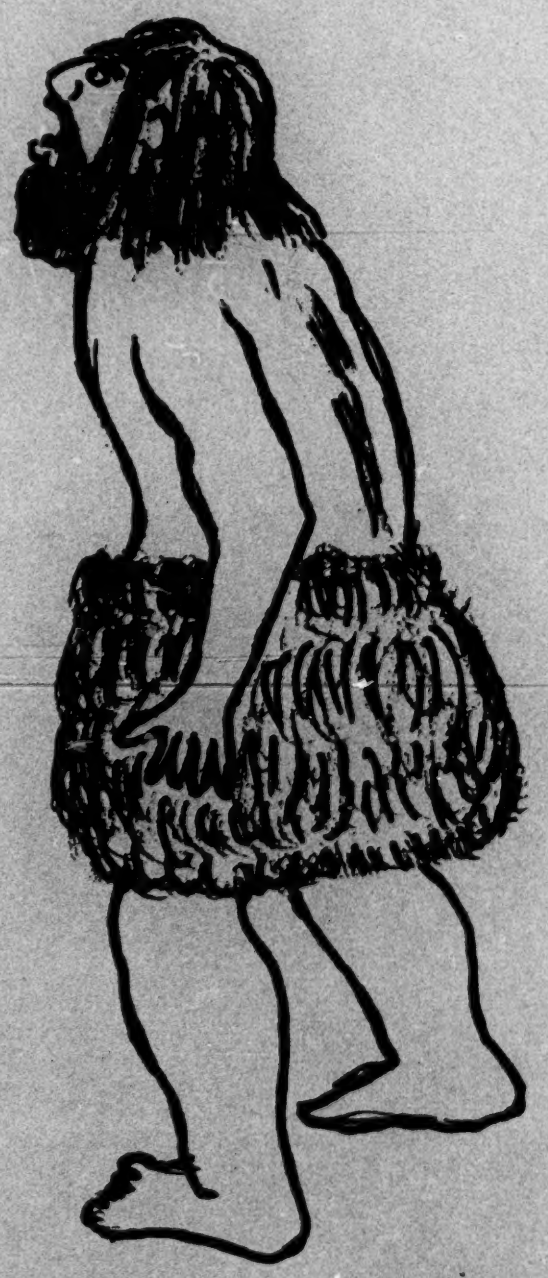
Adelaide Bahr



PREHISTORY

The story of the American Indian is a colorful tale of a people who slowly developed their way of life into a highly civilized culture. Long before the Pilgrims came to America, the Indians had a civilization in which many tribes shared common ideas. One important idea common to the Indian culture was that Man, being a part of Nature, should live in harmony with Nature.

Their respect for Nature was shown in Indian methods of agriculture, religious beliefs, and ceremonial rites. They believed Nature was a controlling source in their lives. Thus, they planted crops by cycles of the moon and worshipped the sun and other natural forces as gods. Their ceremonies involved rites of worship to such gods as the North Star, the Wind and the Rain.



In other areas also, Indians shared common ideas. (Figure 1) For example, the Maya people in Yucatan and the Pimas in Arizona used the same methods of cultivating. Although they lived far apart and did not know one another, both irrigated the land and fertilized their crops.

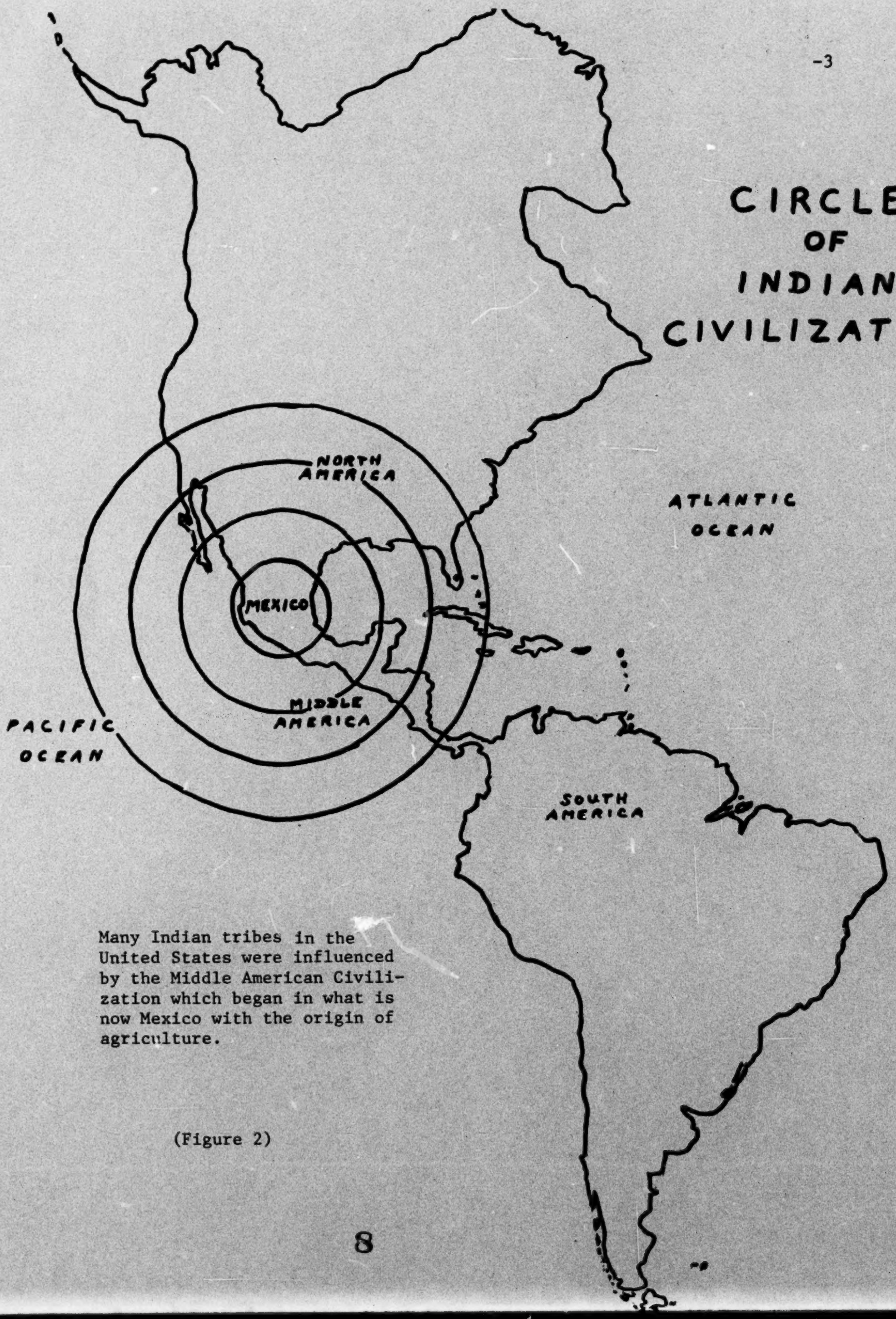
(Figure 1)

Europeans, however, ignoring the ideals of the Indian, tossed aside the harmony-with-nature idea. The European idea of civilization was to modify and control, and even destroy, his natural surroundings to suit his own needs.

Indian Civilization

Each Indian tribe in the southwestern United States belongs to a circle of civilization that began about 10,000 years ago. (Figure 2) This Middle American Civilization reflected the influence of the highly developed culture of the people of the Valley of Mexico and the Mayas in Yucatan. The Pimas and the Mayas, as well as other tribes in the southwestern United States and Mexico, can trace their historical development back to this central source.

CIRCLE OF INDIAN CIVILIZATION

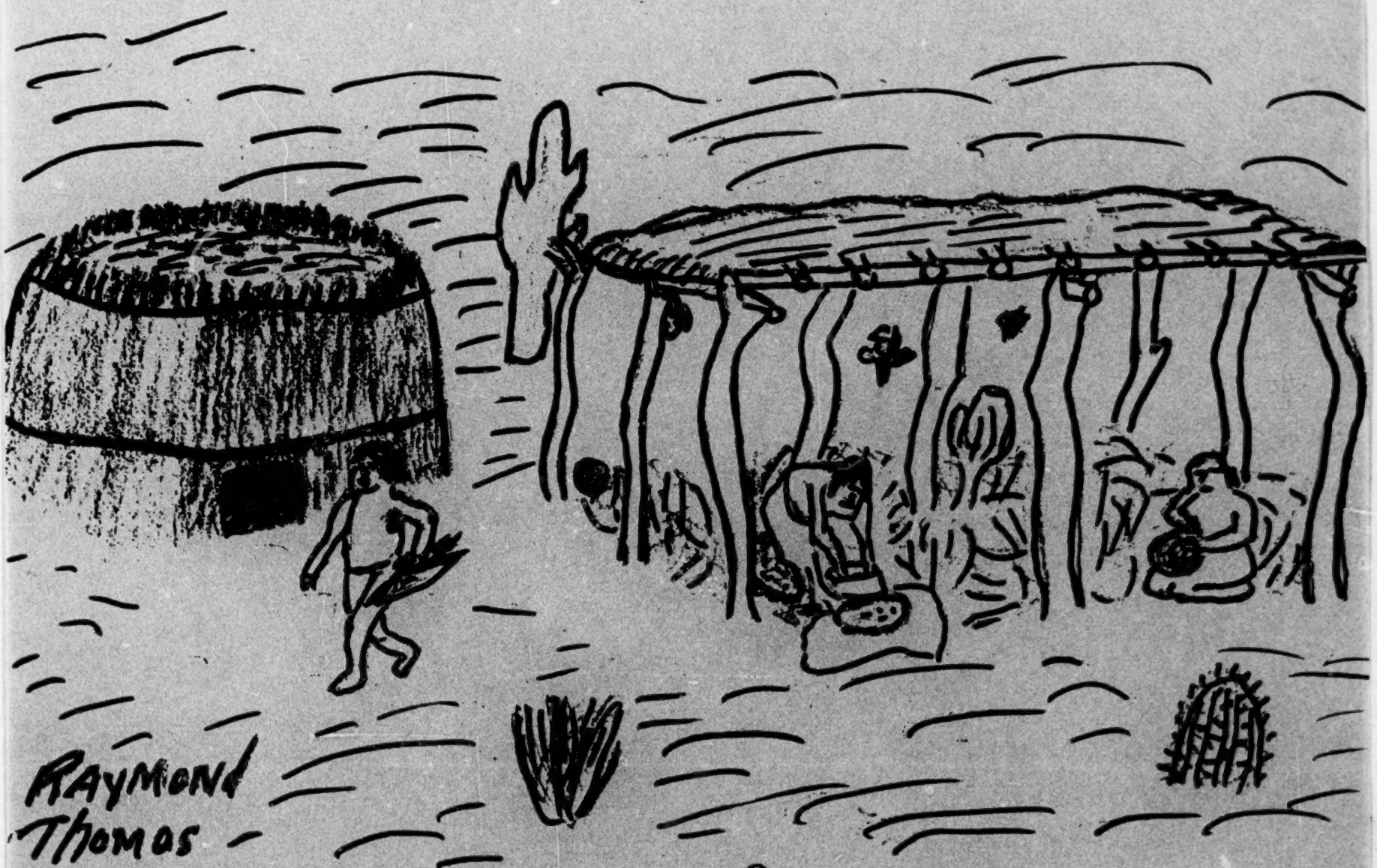


Many Indian tribes in the United States were influenced by the Middle American Civilization which began in what is now Mexico with the origin of agriculture.

(Figure 2)

To understand how these Indian civilizations developed, it is important first, to understand the meaning of the word "civilization." Civilization means an improvement in culture, a more advanced social development of a particular group of people. (Figure 3)

To the individual person, civilization means a variety of things. The necessities of life -- food, clothing, shelter -- are easier to obtain. Though securing these necessities is easier, living gradually becomes more complicated. For example, in civilized cultures, more people live closer together. Therefore, it is necessary that rules, laws, and governments be established in order to insure the rights of all members of society.

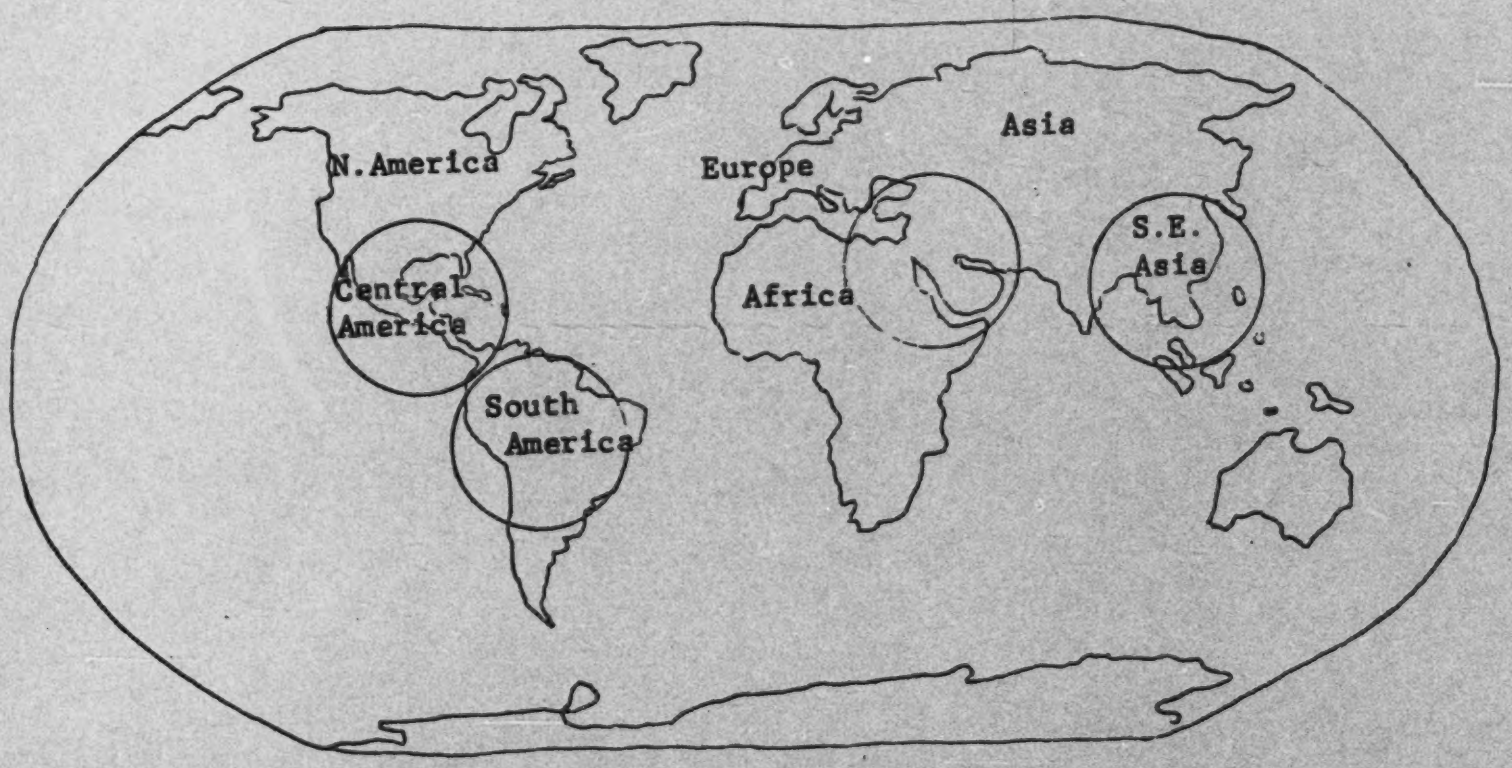


(Figure 3)

All the different Indian civilizations (the Maya, the Hohokam, and the Aztecs and Toltecs from the Valley of Mexico) evolved in this manner from an agricultural background. From this simple beginning, on a low level of existence with only bare necessities, the Indian cultures gradually became civilized the same way as other cultures.

Four Centers of Civilization

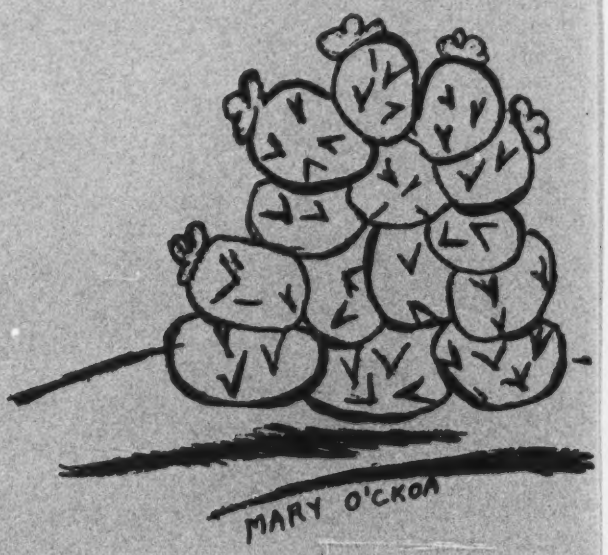
There were four areas where agriculture developed rapidly and centers of civilization were formed. (Figure 4) Because agriculture provided a better food supply, living conditions improved and the culture thrived. Agriculture was the basis of all great civilizations. The world's great civilizations began in four basic areas: Central America, South America, Europe, and Asia. (See map below) The Central American area was the center of Indian civilization in North America.



(Figure 4)

Early Agriculture

The first Indians in America lived by either "hunting" or "gathering." The "hunters" lived in plains areas where plants with edible seeds or fruits were scarce and many large animals roamed. These Indians lived by hunting animals, so their main food was meat. In the Great Plains, for example, many Indians thrived because of the large buffalo herds living there at that time. Other Indians lived in semiarid or tropical areas where animals were small and seed plants were plentiful. These were the "gatherers." In Arizona and Mexico they gathered the seeds of desert plants for food. These seeds made good food because they were very nourishing. They were ground into flour for making tortillas, or were eaten whole. (Figure 5)



Making Tortillas

(Figure 5)

The Indians living in Southern Arizona and Mexico 9,000 years ago knew about the same plants we know about today: the mesquite, prickly pear and the giant cactus. Seeds from these plants fed the people. The yucca and century plant, or agave, grew on higher land, and still higher in the mountains people gathered acorns and pinion nuts for food. Some small animals, including deer, rabbits, birds and lizards, were also eaten. But the main food sources were wild plants, particularly wild corn, wild beans, and wild squash. These plants were small and very different from the corn, beans and squash we have today.

Eventually, some Indians learned to cultivate their own plants for food. (Figure 6) The idea of cultivating plants rather than merely gathering what might be available, began in Mexico. This practice spread rapidly from there south to the Yucatan and north to Arizona. One way in which Indians were able to grow their own plants can be shown by the story of how they developed corn.

(Figure 6)

The Story of Corn

For a long time, the story of corn was a mystery scientists could not solve. They knew that the Indians of Mexico had learned how to cultivate corn around 5,000 B.C. But they wondered about the methods they used to domesticate corn and how present-day corn came to be. Since wild corn no longer exists, they had no plants to observe and study. Then archaeologists found remains of wild corn in caves in Mexico. It had been collected for eating by cave dwellers 7,000 years ago.

Wild Corn - Actual Size
(Figure 7)

Wild corn was a very tiny plant, too small to be used the way we use corn today. (Figure 7) It was eaten green, the whole little ear placed into the mouth, chewed, and then spit out. The stalk of the plant was very sweet and was chewed like sugar cane.

The people of Mexico who ate wild corn started to plant its seed close to their camps near a source of water. As they collected the wild corn each year, they would keep the larger kernels, store them in baskets, and save them until it was time to plant them again. Since the biggest seeds were chosen for planting each time, the plants gradually became bigger.

Another kind of corn was found in caves in New Mexico (Bat Cave) and Southern Arizona (Ventana Cave on the Papago reservation). People who lived in these places in 4000 B.C. somehow had been in touch with the people of Mexico. This corn was not wild, for no wild corn grew in these regions. It was a small type of cultivated corn somewhat like popcorn. It grew only if it was planted and cultivated. By the year 1500, corn had become almost as large as today's corn, and the original wild corn plant had disappeared.

Pottery

The early Indians, who lived a wandering life, used baskets as containers since they were light and unbreakable. Later, when their way of life became more settled, they also used clay pots, which were clumsy and heavy to carry, but better suited for cooking and storing food than baskets. (Figure 8)

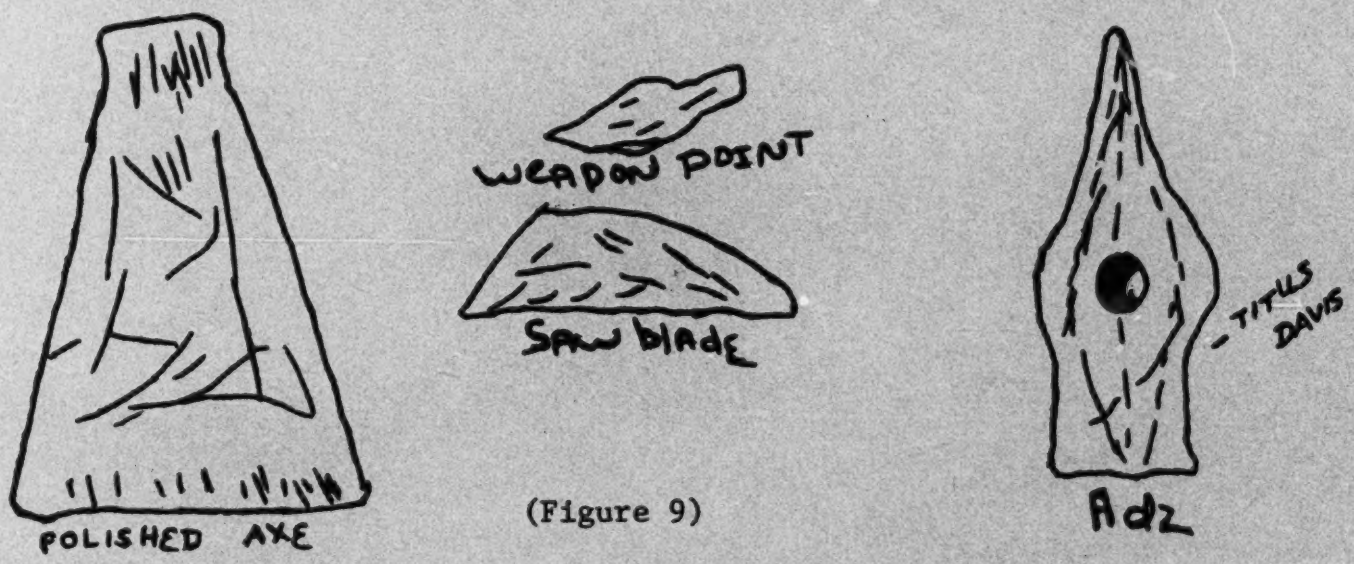
(Figure 8)

The first pottery appeared at the same time as the first cultivated plants. It could be used to boil water over fire; therefore, cooking methods changed. Corn was no longer roasted and chewed green. It was allowed to ripen and harden. The ears were husked and the hard kernels boiled with lime in clay pots. They were then ground with a grinding stone and made into tortillas. Beans, too, were no longer eaten green but allowed to harden, then later, shelled and boiled.

Along with agriculture, pottery helped increase the Mexican Indians' food supply. Hardened corn and beans could be stored for longer periods in pottery than in baskets. Though dried food was difficult to chew and digest, cooking it in pottery made it edible.

Village Life

The discovery of agriculture and the development of pottery-making led to the establishment of village life. Rather than wander about in small groups from place to place, larger numbers of people began to live year-round in the same place. Archaeologists have found remains of the first permanent houses. These remains indicate that each family group had its own fields and a variety of property, including storage baskets, pots, grinding stones, agricultural tools, and even jewelry.



(Figure 9)

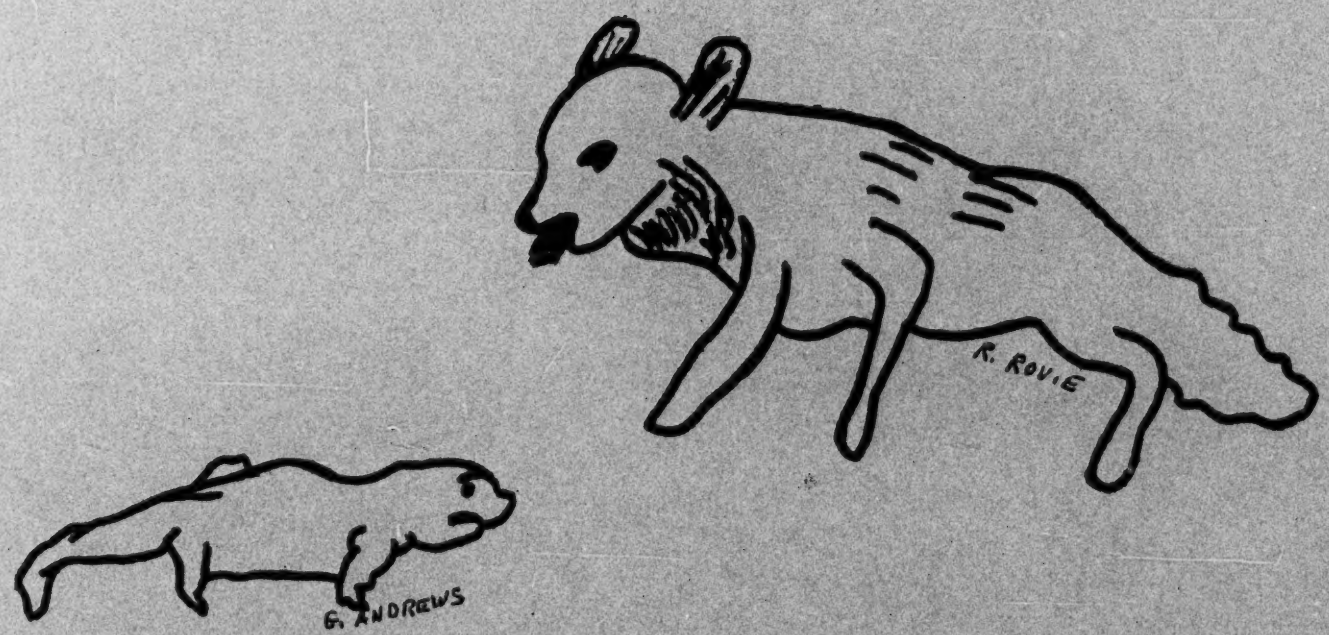
This great variety of remains leads us to believe that social life was complicated. Jewelry and decorative pieces are indications of a less primitive culture. Such people have the time and interest for things other than the basic necessities of life. For example, pottery figurines, usually representing women, have been found in Mexico, Arizona, Yucatan, and the Eastern United States. Although their purpose is not known, it is believed that they had some sort of religious meaning. If so, this indicates that religious ideas developed and spread throughout the tribes along with the techniques of growing and preparing food.

Conclusion

There is little factual knowledge about the prehistory of the American Indian. By examining remains of that time, however, scientists can tell much about the way early Indians lived. Particularly in the areas of agriculture, religion, ceremonial rites and daily life, their culture becomes clear. As later Indian civilizations are studied (the Mayas, the People of the Valley of Mexico, and the Hohokams), one bond common to all will be seen -- the sharing of ideas among different tribes and civilizations.

PREHISTORY

TEACHING UNIT



DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Discuss Middle American Civilizations and the circles of Indian Civilization.	Indian Civilization developed from the circles of civilization that began in Mexico 10,000 years ago.	Student Booklet, Introduction, p. 1; Map. p. 3 & 5.
Compare the development of Indian and European civilizations.	Though America developed an Indian civilization, rather than a European one, the two have similar parallels. Examples of early European civilization: religion--the Bible; government--the ancient kings and emperors on the one hand, the democratic Greek city states on the other; writing--the alphabet. Examples of prehistoric Indian Civilization: People of the Valley of Mexico; The Mayas; and the Hohokams.	Our Beginnings, Chapter 1, p. 48-50 (the idea of one God); Chapter 2, p. 69-71 (early government), Chapter 3, p. 37 (summing up) Student Booklet, The Valley People, Unit III; The Mayas, Unit II; and The Hohokams, Unit IV.
Compare Indian and European beliefs regarding man's relationship to his environment.	The distinguishing mark of the Indian way of life is their basic belief that man must live in harmony with nature, whereas the European way of life is based on their belief that man must conquer nature. Are these like the present-day Indian ideas?	
Discuss the meaning of civilization.	Material improvements provided by early civilization included better shelter, irrigation and roads, and easier procurement of food. Examples: Government becomes more complex; communities become more organized.	Transparencies on civilization. T3B thru T4V.
Explain the increased complexity and organization (not necessarily improvements) of these social aspects. Discuss how civilizations grow--ideas spreading from people to people, each becoming civilized in turn.	Example: Roman civilization flourished when the English were primitives. Roman emperors conquered (and attempted to civilize) the English peoples, yet 2,000 years later the English led the civilized world. Example: Middle America was civilized when North American tribes were still wild.	Our Beginnings, p. 215-19.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Discuss with students the idea that different civilized people excel in different things.	Example: Greeks, and the American Mayas, excelled in the arts and philosophy; Romans, and the People of the Valley of Mexico, excelled in conquest and administration. Today, some Indian tribes excel in weaving, some in pottery, some in basketry.	Our Beginnings, Chapter 1, p. 87; Chapter 2, p. 129; Chapter 3, p. 155. Student Booklet, The Mayas, People of the Valley of Mexico.
Explain how people develop at different rates because of geographic conditions.	Civilization started in the south where food plants were domesticated, then spread to northern climates. Example: Better agricultural conditions result in greater food production which accelerates the civilization process.	
Discuss the advantages and disadvantages of civilization. Civilization is a means of providing for people's needs, not necessarily a "better" way of life.	Example: Paradoxically, modern civilization can free people (e.g., from necessity of obtaining food daily), while enslaving them (e.g., a tyrant or an organization).	
Project #1: Students can discuss the pros and cons of civilization by considering the advantages and disadvantages of living on the reservation as opposed to the city.	Examples: The disadvantages of living on the reservation include scarcity of stores, no running water or medical care, use of wood for fuel. Some of the advantages are the freedom of space, closeness to relatives, less money needed, and free fuel (wood).	
Project #2: Cite the diet of a "gathering people" as an example of how civilization can bring about advantages and disadvantages.	A "gathering" people's diet is more varied with less starch and fats (advantages). There are fewer diseases than in civilized society (such as infectious epidemics and overweight problems). Some disadvantages are: food is available only seasonally, with periods of great scarcity; much time and effort is spent obtaining food.	Student Booklet, p. 7.
Explain that each center of civilization developed from an agricultural background.	Location of centers of civilization: 1. Asia - Oriental 2. Middle East - Caucasian 3. Middle America - Indian 4. South America - Indian	Student Booklet, Map, p. 5.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Each center had a different agricultural background, its basic character being determined by early discoveries of food in each area. All four centers have contributed their own traditional foods to today's civilization. The two centers of civilization in America were the Middle American and the South American. Discuss the development of agriculture and how reliance on agriculture encouraged a more settled way of life. Show how Indian life was adapted to very special geographic conditions. Note: Encourage students to generalize about the characteristics of Middle American civilization from their Pima experience. Choose one or more of the following projects for discussion: Project #1: Reconstructing the past. 1) Through excavated remains (refuse) people left behind. 2) Through comparison of later Indian tribes who lived in climates similar to prehistoric ones (e.g., the Pimas).	Methods of cultivating and preparing foods varied among the four civilizations. For instance, even today, people in each of these areas prefer foods traditional to their culture. Example: In the world-wide consumption of crops, the highest tonnage of rice is in China; the highest of potatoes, South America; corn, Middle America; and wheat, the Middle East. Northern American Indians were affected only by the Middle American Civilization. Domesticating of wild plants, such as corn, led to the development of agriculture. Examples: The Pimas' relied more on agriculture than the Papagos. They lived in the same village continually by a river. Their villages were larger than those of the Papagos who were not as wealthy. But whenever the river failed and there was no water for their fields, they turned to the Papago way of life--gathering. Examples: Compare the buffalo hunters of the plains with the gatherers of Middle American civilization. The Pimas represented the most typically Indian way of life (one based on agriculture and in some tribes supplemented by gathering). Since we have no direct knowledge of the prehistoric period when food cultivation was discovered, we must reconstruct it in these ways. 1) Small groups of wandering people left fewer traces than large groups of settled people whose refuse accumulated.	The Epic of Man, China, p. 195 S. America, p. 227 Mid. America, p. 209 Middle East, p. 54-57. Student Booklet, p. 5. Transparencies, T3B thru T4V. Our Beginnings, p. 17-19.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Project #1, continued: Discuss with students how these two techniques might work. Ask them to think about their own house, their garbage can, what happens to broken objects, etc.	2) The presence of pottery and grinding stones gives us some knowledge of the methods used in food preparation. 3) Cave-dwellers' remains are preserved better than those who lived in mud or brush houses. Specifically, what objects used by a group of people would survive (probably) for 10,000 years? Which would disappear? Examples: 1) Compare pottery that could last for centuries with baskets that probably would not last. 2) Charred food is preserved longer than boiled food, which gets mushy and rots. 3) Storage baskets show a period of plentiful food supply. 4) Seed food lasts longer than green plants, and animal bones last longer than either.	
Discuss some ancient Indian ideas concerning religion or government. These can only be surmised from insignificant clues.	Examples: 1) A person buried with many objects or decorations might be an important chief. 2) If the burials are oriented in the same direction and the openings of houses are also oriented in the same direction, this might suggest that direction had some kind of religious significance; e.g., the entrance to the Pima's ceremonial round house always faces East.	
Project #2: Present living habits of early gatherers, Papagos and Pimas.	Ventana Cave is an archeological site in Southern Arizona that contains remains of early gatherers. Pictures of its remains are a source of information about the living habits of prehistoric gatherers and are on exhibit at the University of Arizona Museum in Tucson.	Ventana Cave Report. (If possible, a field trip to the University of Arizona might be arranged to see the exhibit at the University of Arizona Museum in Tucson.)

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Discuss with students a semiarid climate. 1. Point out that a seasonal climate encourages a semi-nomadic life and necessitates storage and preservation of food. 2. Show the necessity of people moving with the harvest to both valley and mountain. 3. Discuss the Papagos as representative of life in a semiarid climate.	Major rainfall is limited to two seasons, summer and winter. Cultivated plants can be grown only during these seasons because of limited water source. (Rivers, few in number, often ran dry.) During dry periods, tribes were forced to move into the mountains where more water was available.	The Papago Indians, p. 13-16.
4. Discuss different harvest times for desert plants.	Papagos (closely related to Pimas) planted corn, beans and squash, but lived primarily off wild foods. Examples: Cholla buds were ready in May, while Sahuaro fruits ripened in late June or July. Prickly pear were ready in late summer and mesquite beans in the fall.	
5. Some seeds were not consumed but were saved for next year's planting. Other foods were dried and stored for winter consumption.	Examples: Mesquite beans were used to pound into flour; meats were cut into thin strips and dried.	Field trip to discover mesquite beans and see how they are grown.
Project #3: Make a chart or bulletin board showing the difference between wild plants and cultivated plants.	Example of one difference: wild plants feed few people; cultivated ones feed many.	
Ask students to bring a wild gourd, a squash, or squash seeds to school.	Show the difference between wild gourd and cultivated squash: wild gourd is small with small seeds and thin flesh; cultivated squash is large with large seeds, thick flesh. (The comparison is a bit inaccurate because gourds are different from squash, but it should make the point.) Indians considered wild gourds good only for coyotes, but in hard times they cooked and dried them, grinding the seeds into mush.	
Ask students to bring an ear of Pima corn to school. Compare it with some superhybrid corn developed by agriculture department at ASU or U of A, showing increase in size of ear and kernels.	Both types of corn are cultivated, but the corn produced by the University has received much more selection for size (selection increases the food yield of a plant.) On the other hand, Pima corn is hardy and much more resistant to draught and poor growing conditions than the superhybrid.	Teacher can bring any commercial hybrid corn to compare.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCE
Project #4: Make transparencies that show ways of preparing food.	Look for illustrations of grinding, pounding, parching over the fire, boiling, roasting. Which cooking method needs stone or wood containers? Which needs baskets? Which needs pottery? Which method of preparation goes with hunting? gathering? agriculture?	
American Indians never fried foods. Why?	Indians had no easily available source of lard or fat. (Deer are very lean; cows were not introduced until later by Europeans.)	
People like sugar. Where did Indians get their sugar? Ask students to think of the desert plants they enjoyed eating as children.	Some plants contain natural sugars: mesquite, beans, sahuaro fruits, prickly pear.	
Introduce the topics of pottery and village life.	Though the development of agricultural practices was important in Indian culture, it went hand in hand with other advances, such as pottery-making. Later civilizations were founded on the cumulative effects of many discoveries taking place over a period of two or three thousand years.	Student Booklet, p. 7 & 8.
Indian tribes who were wanderers did not use pottery since it hindered their traveling way of life.	Wanderers had to carry all their belongings with them, so baskets were more satisfactory containers.	
Tribes who led sedentary lives, however, cultivated their fields and made use of pottery.	The benefits of an agricultural way of life were greatly enhanced by the new ways of cooking food in pots.	
Agriculture and the discovery of pottery are complimentary: each reinforces the other.	An agricultural way of life is possible only when a steady food supply is available.	

UNIT I - PREHISTORY

Student Transparencies

1. Lady gathering cactus fruits of the Sahuaro cactus. This type of gathering has gone on for thousands of years, long before agriculture was developed. Indians such as the Pimas still gather cactus fruits occasionally.
2. Hunting was a technique of getting food that continued side by side with agriculture. In arid countries, the deer is probably the largest game animal.
3. Here we see cultivated plants in Central America. These plants were first cultivated 6,000 to 7,000 years ago and are still very important food plants.
4. All the work in the fields was done by hand with wood implements. Here, the man makes a hole with the digging stick; the woman drops four seeds into the hole. Often the whole family helped with planting and harvesting.
5. Cultivated plants need constant care in order to produce good crops. It is especially important to destroy the weeds that steal nourishment from the plant. This work was done by hand and was repeated many times during the growing season.
6. Methods of transportation. Since Indians didn't have domesticated animals, people had to carry heavy loads themselves. For this reason, when families moved they carried few things and only light ones. Pottery and grinding stones were left behind; baskets were easy to carry.
7. Indians from Central America to Northern Arizona make tortillas from ground corn.

Student Transparencies (cont.)

8. Grinding on a metate was a very widespread method of food preparation. Note the big pot that holds water and the baskets used by the woman to hold her corn.

UNIT I - PREHISTORY

Description of Transparencies: Agricultural

TI "People Have Needs" (Pima translation). Civilization can be understood as the development of different and more efficient ways of taking care of people's needs.

T2 Peoples' needs for a better life include: food; clothing; shelter; meaning and knowledge. Some of these needs are material. They relate to physical well being. Others are spiritual; (freedom, for instance, is a spiritual need.)

T3 People can take care of their needs in many ways. Simple needs can be handled by the individual. Complex needs require the help of people who specialize in particular areas. Ask students to give examples of specialized work in our society. Explain that in highly civilized societies almost everyone does specialized work.

T3A Man must eat to live. Food is an essential need of people.

T3F Man has developed five basic ways for obtaining food. Of these hunting and gathering are the earliest less specialized techniques; pastoralism and agriculture are later developments. These soon became very specialized. (Think of agriculture and dairy industry nowadays.)

T2D Weapons made big game hunting possible; even such early techniques as hunting could be made more efficient. Better weapons, sharper spearheads, bow and arrow, etc., made hunting easier.

T2E Gardening and a more controlled food supply. Gathering comes between the more advanced techniques of food getting and the earlier techniques.

T3V Our modern day foodgetting is based on agriculture and pastoralism.

T2W Machinery helps the farmers in the midwest produce our grain crops. The addition of machines, manpower and animal power is a great step towards efficiency.

T2H Man must shelter himself from the elements. Shelter is another important need of man.

T2K Caves are warm shelters, but are found only in certain places. People who live away from caves have to develop other types of shelter.

T4A Other early types of shelters were probably very flimsy and took a very short time to build. They could protect people from the wind, but not rain and cold. A hut with a permanent roof and walls gives better protection. It also takes a longer time to build.

T4S Sedentary people can utilize more permanent shelters.

T2M Pueblo type structures often added a 2nd floor. Pueblo homes are very permanent. They have lasted hundreds of years. The population is very concentrated.

T4W People in the United States usually live in small family groups.

T15 Communication. Civilization has changed our means of communication. The most direct way of communicating is by speech. Writing makes it possible to communicate at a distance and also through time, since it lasts longer than memory. Machines have further extended our ability to communicate rapidly at a distance.

T3C Food-getting depends on the technology of man's society.

T3B Food-getting depends on resources available in man's natural surroundings.

T3H These tribes had little time for anything but food-getting.

T3E The more control man has over his food getting, the less he must depend on what is readily available.

T3D Food-getting depends on the number of people there are to feed. One man could easily feed himself on nuts and berries. The same man would have difficulty feeding twenty.

T2F Agriculture. Man learns to till the earth more effectively.

T4V Apartment dwelling requires an adequate food supply for the relatively concentrated population.

T24 Hunting in the desert. Small game, mostly rabbit.

T25 Gathering in the desert. Cactus fruits.

T23 Other desert plants that can be used for food: prickly pear, century plant, yucca.

T26 Cultivated plants of central America: beans, squash, corn.

T12C Evolution of cultivated corn: increase in size.

UNIT I -- SOURCES

Eibling, E. F., Frederick King, and James Harlow. Our Beginnings in the Old World. The Laidlaw Brothers, River Forest, Illinois. 1961.

Haury, Emil, The Ventana Cave Report. University of Arizona Press, Tucson Arizona. 1950.

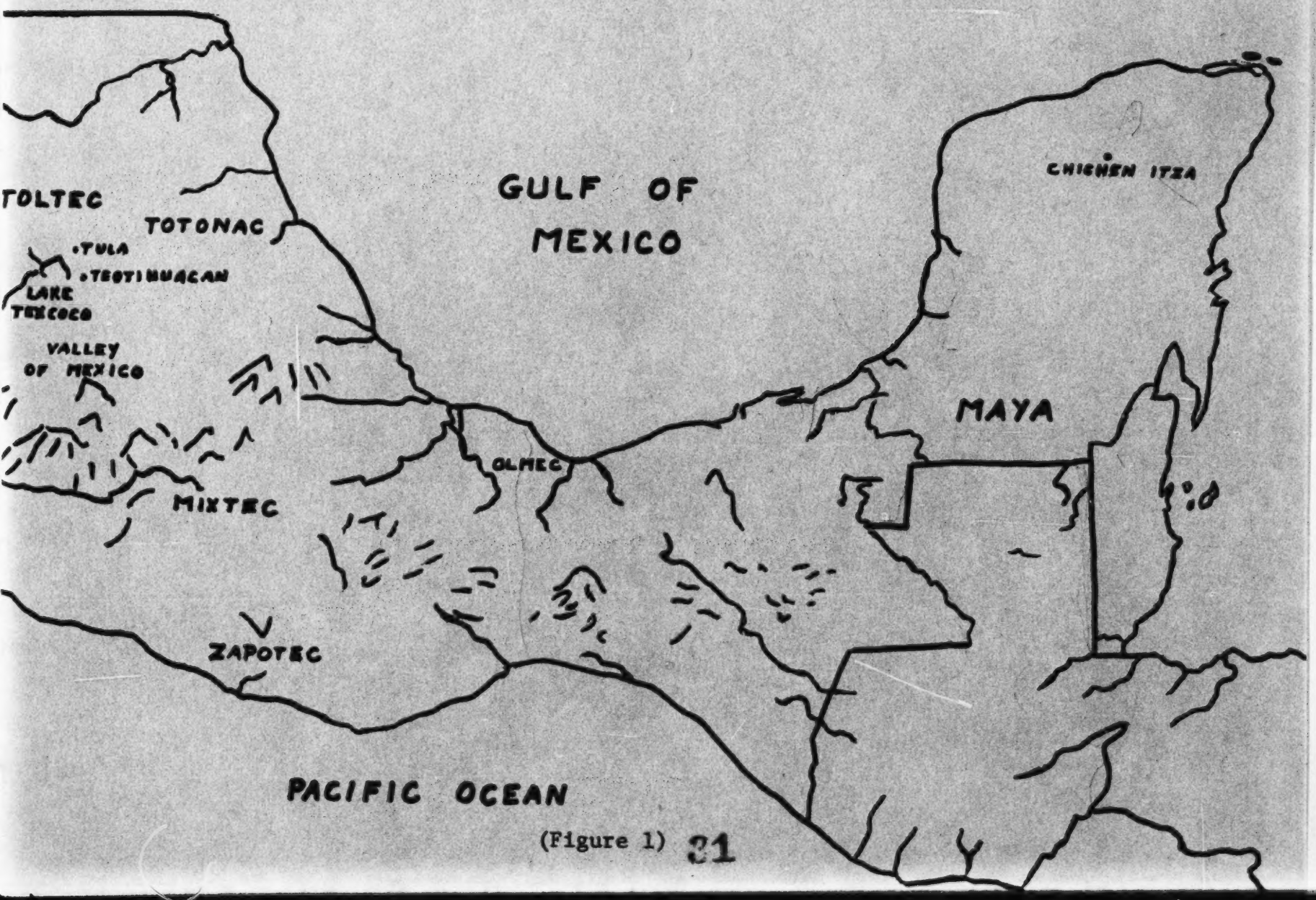
Museums at the University of Arizona and Tuzigoot National Monument. Student Booklets.

Transparencies: Student Transparencies, 1 through 8.
Agriculture Transparencies, T-1 through T-12C.

Underhill, Ruth, The Papago Indians and Their Relatives the Pimas. U. S. Department of Interior, B.I.A. Branch of Education. Washington D. C., 1941.

THE MAYAS

Two thousand years ago in Yucatan a highly civilized people called the Maya emerged. (Figure 1) Their lives were based on agriculture, and on this foundation a great Indian civilization developed. Over many generations, these people added the areas of art and science to their culture. The Mayas developed a system of writing and produced major advances in architecture, astronomy and mathematics, as did the Chinese and the people of the Middle East.



(Figure 1)

With a population close to a million people, the Mayas were divided into many tribes, but they were one people. They spoke the same language, had the same beliefs and customs, (Figure 2), and lived together peacefully. Though each tribe was independent and chose its own chiefs, they were not at war with one another.

(Figure 2)

Beliefs and Customs

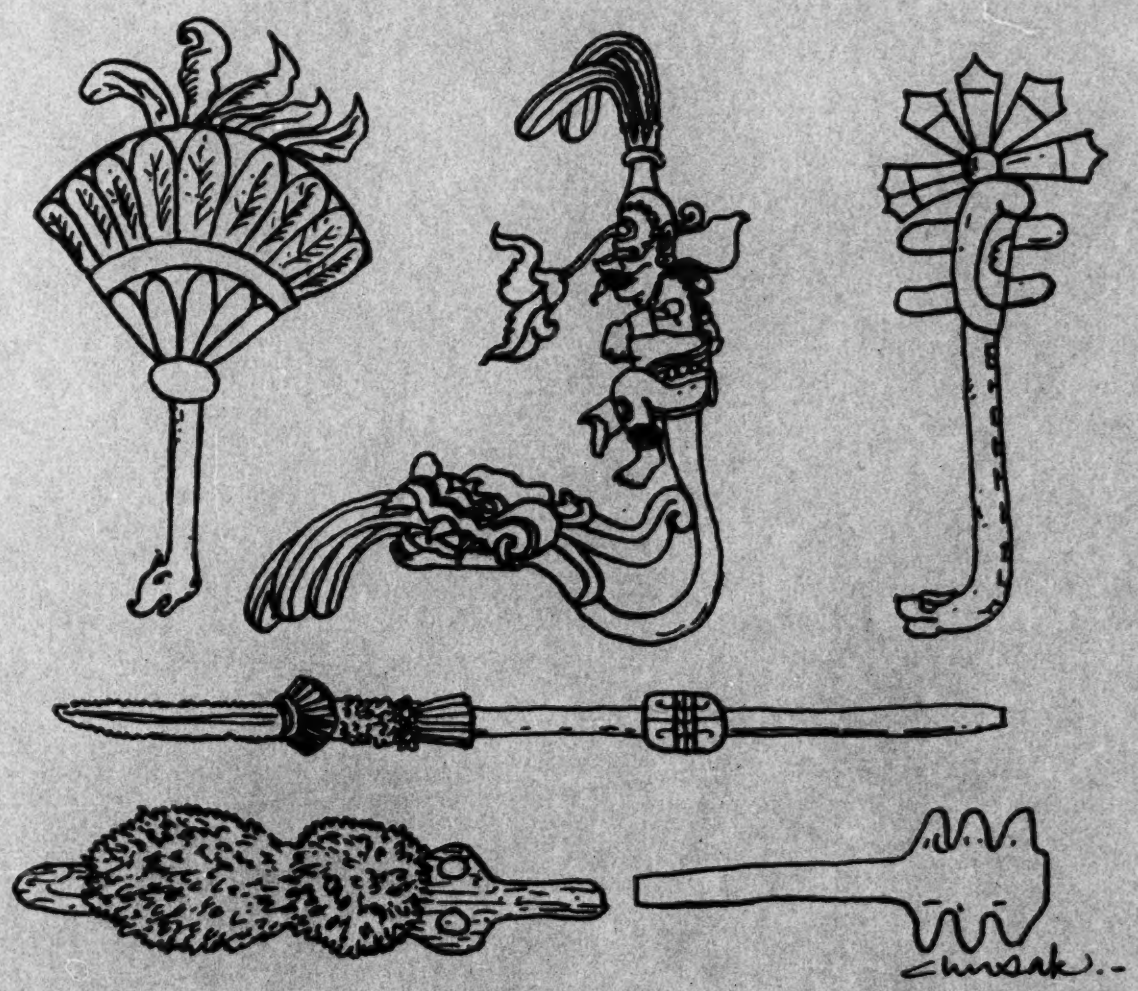
The rain god nourishes a tree; the death god uproots it.

Agriculture

The Maya villages in Yucatan had become prosperous because of their successful efforts in growing many different crops. There was plenty of land and water for growing food with the thick jungles and heavy rains. When more land was needed for crops a piece of jungle was cleared by cutting down the huge trees with stone axes and burning the underbrush. After clearing his land, the farmer dug holes with a long sharp stick, called a digging stick, and placed four seeds in each hole. Later, weeds were pulled by hand or removed with a stone or wooden hoe. The whole family worked in the field, planting, weeding, harvesting. All the work was done by hand since there was no machinery. The Mayas had no metal, but made all their tools and weapons of wood and stone. (Fig. 3)

Corn was the main crop grown, but beans, squash, and tobacco were also part of the yearly harvest. By working 45 days in the fields, a man could grow enough corn to feed a family of five for a year. In addition to their own crops, the Mayas obtained cocoa from Indian tribes to the South. Besides making a very good drink, the cocoa beans were also used as money.

WOODEN INSIGNIA AND WEAPONS

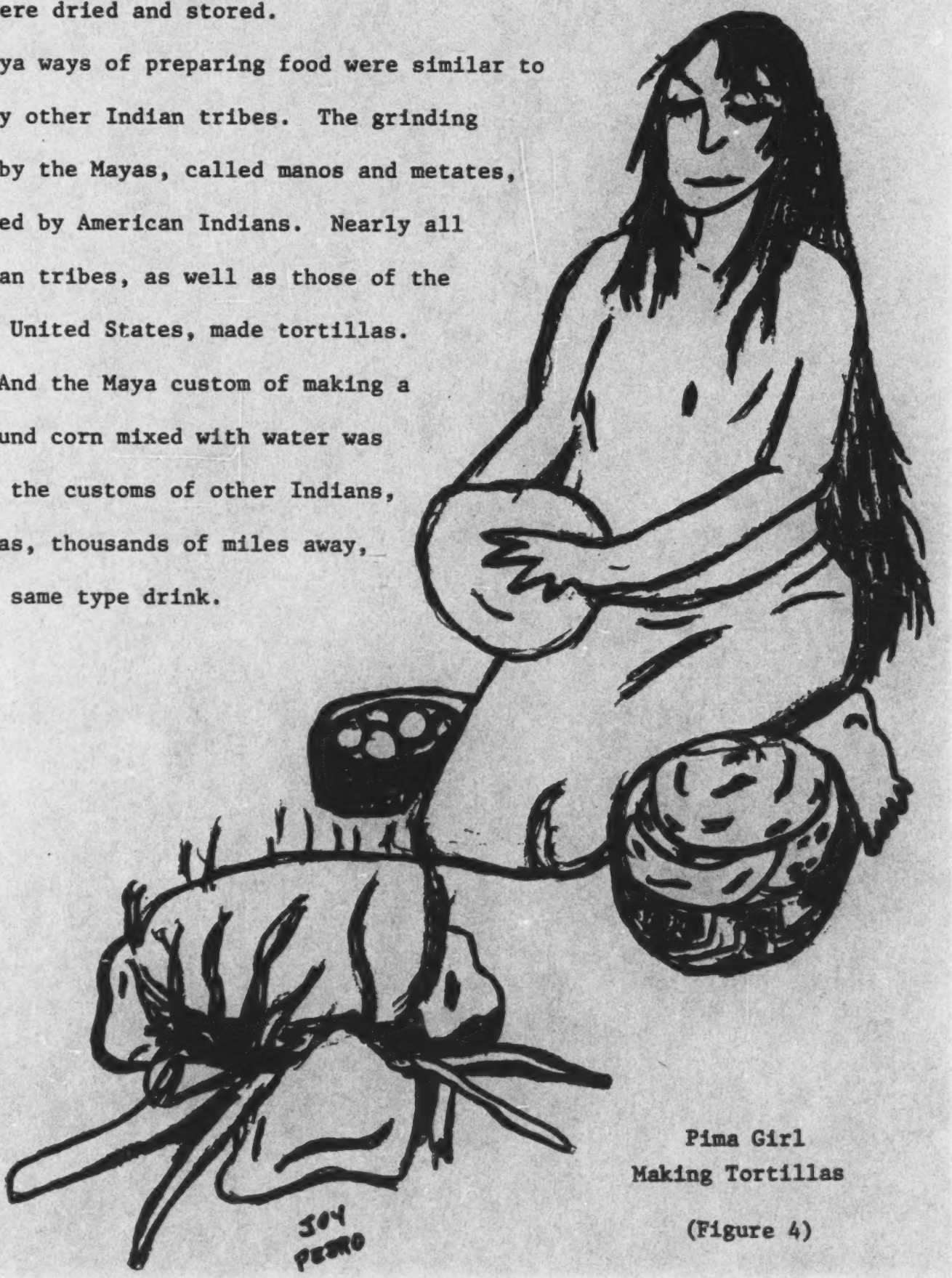


(Figure 3)

Food

The women spent a great deal of their time preparing food. They boiled their corn with lime, then ground it on the grinding stone. This ground corn was made into tortillas shaped on a flat pottery slab. Beans and squash were dried and stored.

The Maya ways of preparing food were similar to those of many other Indian tribes. The grinding stones used by the Mayas, called manos and metates, were also used by American Indians. Nearly all Mexican Indian tribes, as well as those of the southwestern United States, made tortillas. (Figure 4) And the Maya custom of making a drink of ground corn mixed with water was reflected in the customs of other Indians, like the Pimas, thousands of miles away, who made the same type drink.

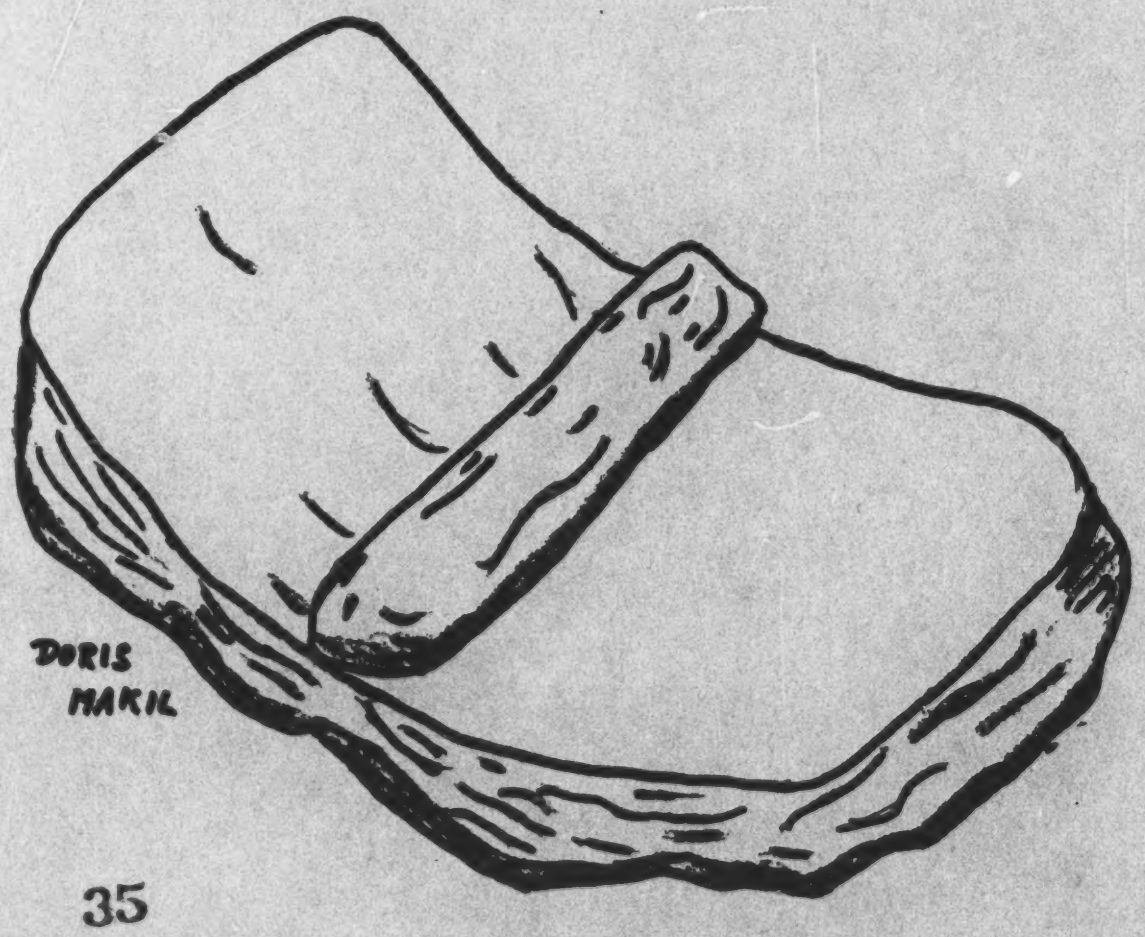


Pima Girl
Making Tortillas

(Figure 4)

Houses

Houses were plain but strongly built for year round living, as the Maya were not a nomadic people. The "wattle and daub" method of building was used in the construction of these houses. In this method, the walls were made by troweling mud on a frame of sticks. This procedure was a favorite among some American Indians, including the Pima. The roofs of the Maya houses were made of straw or grass and were very tall and steep since the jungle climate was extremely rainy. Inside the house, there was a fireplace, but no hole for smoke, which indicates that most of the cooking probably was done outside. Other Maya furnishings consisted of pottery drinking cups, a grinding stone (metate) for each woman in the household, (Figure 5), and straw sleeping mats. Tools for gardening, the loom, the troweling stick and spears were also kept within the house.



(Figure 5)

Dress

The dress of the Maya and the American Indian were similar in many respects. Mayas wore loin cloths, sandals of deer hide, and a square cloth on the shoulders like a poncho. Women wore a skirt, and sometimes, a blouse and sandals. Maya rulers wore clothes similar to other Mayas. An exception was the headdress (Figure 6) made of wood or straw in the shape of a jaguar, serpent or bird. These were decorated with beautiful feathers and precious stones. The greater the importance of a person's position, the larger and more elaborate was his headdress.

36

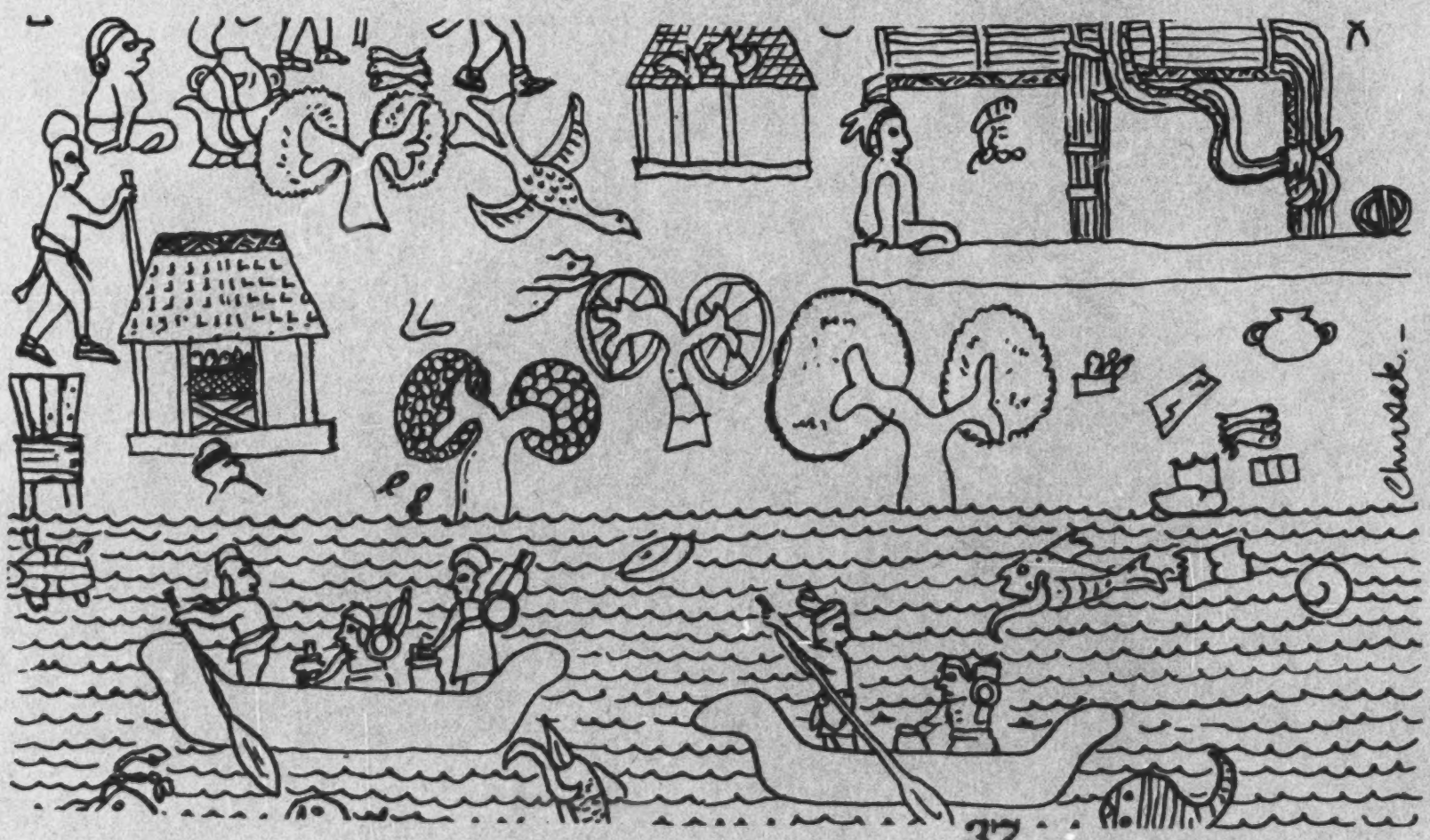
(Figure 6)

Maya men and women wore long hair, tattooed their bodies and wore a great deal of jewelry. The men painted their bodies different colors which had special meanings: blue and red were for guards; black for prisoners; blue for priests.

This type of dress was also a cultural characteristic of American Indians. However, great care was given to their hair arrangement, body painting and tattooing. Pima hair style showed much variety, for example. Also, rather than cover their bodies with clothing, the Pimas preferred to decorate them with paint and tattoos. Northern Indians, on the other hand, paid more attention to covering their bodies than to decorating them, due to the colder weather.

Social Life

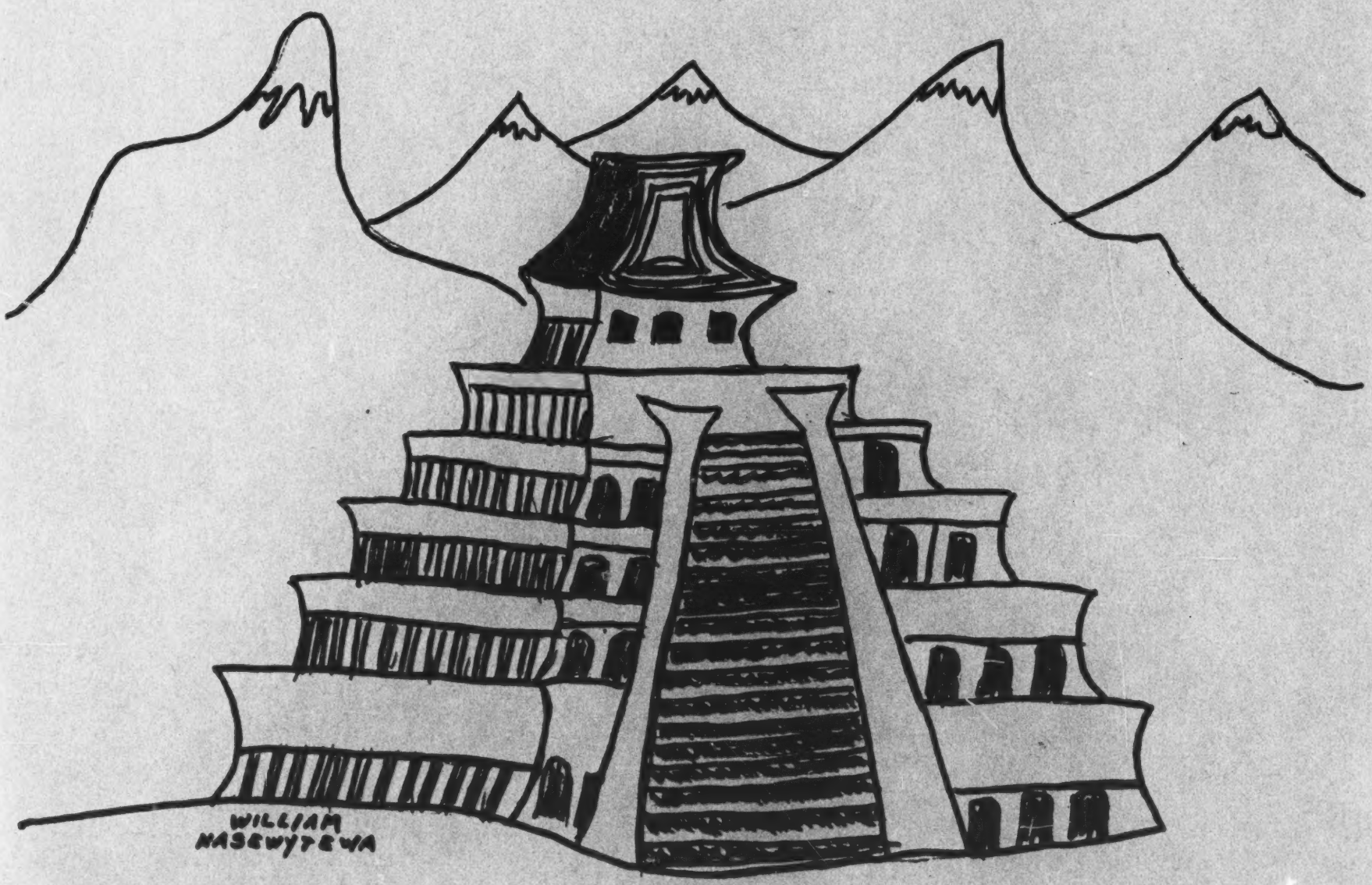
Wall paintings found in that area of Mexico indicate that Maya villages were probably small and surrounded by fields, (Fig. 7) with all the families in the village related to each other.



(Figure 7)

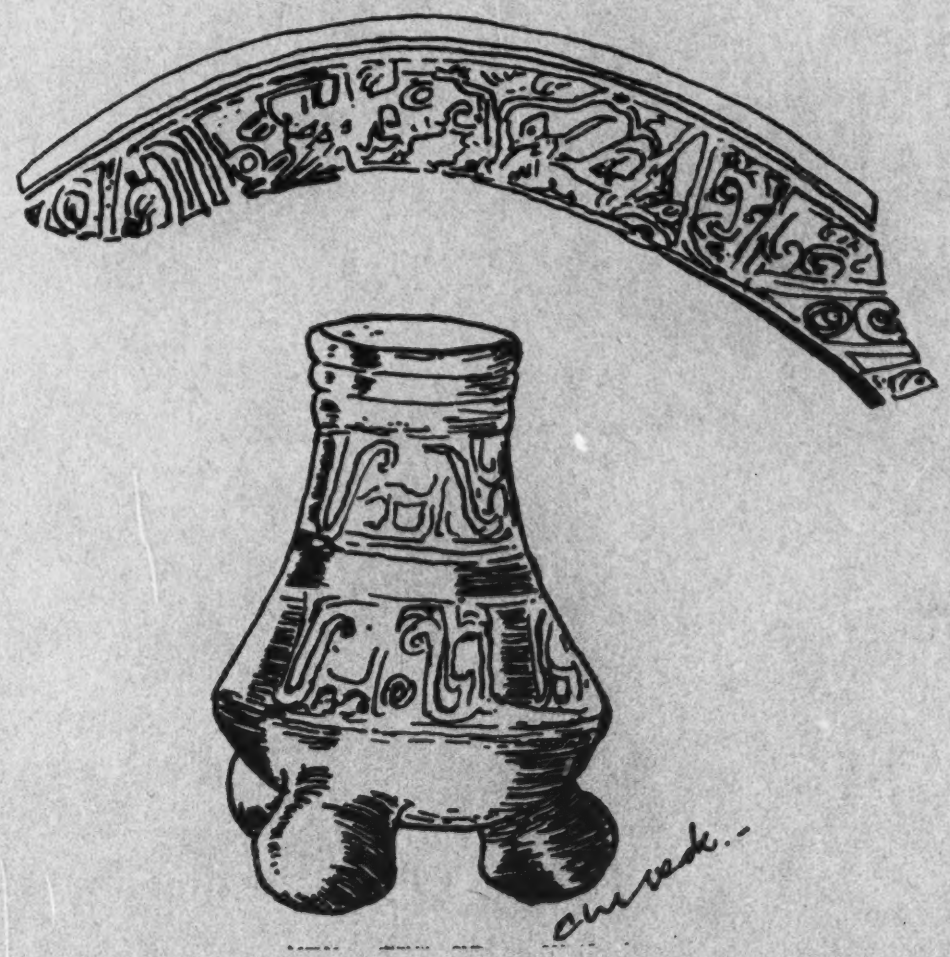
It was within the village that the private life of the Maya family took place. An important event in the village was a ball game played with a large rubber ball that could not be touched with the hands. A modified form of this game was played throughout Mexico and Arizona by other Indians.

Public life took place in large, stone ceremonial centers, sometimes connected by paved roads. Temples, palaces, and observatories placed high on pyramids of earth highlighted these centers. (Figure 8) At the base of the temples, pillars of stone called "stelae" were carved with important dates of the past. In this way, people attending ceremonies could know their past history.



(Figure 8)

The chiefs and priests organized the community and directed the work of building the centers; all the people helped with their own handwork and part of their harvest. The skills of the Maya craftsmen were shown in carving and in the decoration of the temples and palaces. The best art work of all the people was set aside for the ceremonials. For these, the Mayas created beautifully decorated pottery and intricate sculpture (Figure 9) .



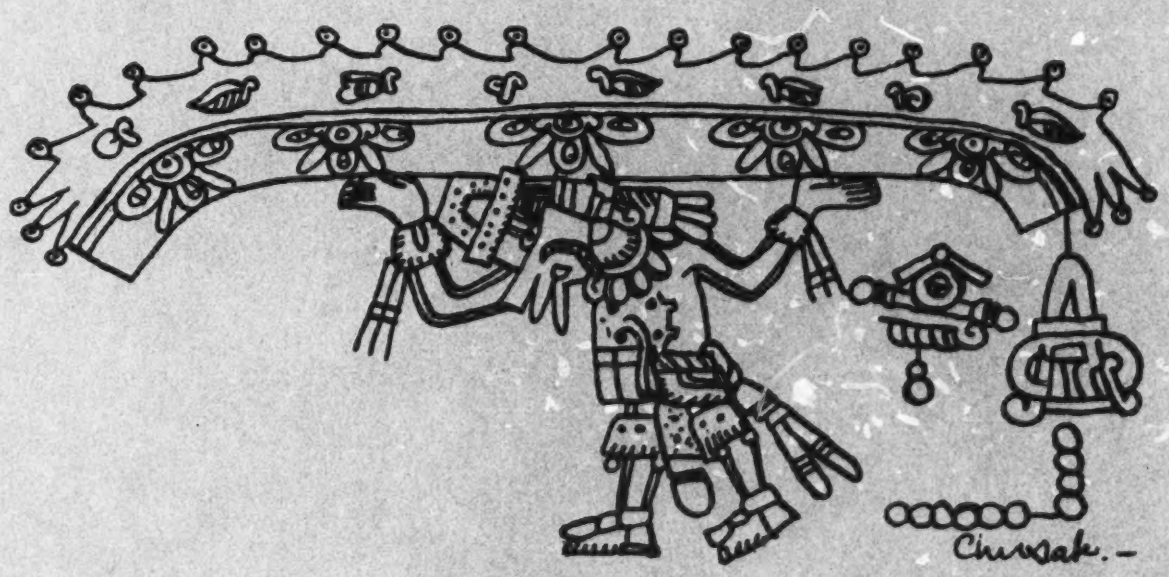
Maya Pottery (Figure 9)

The centers were empty most of the time, since even the chiefs lived in the villages. On important occasions, however, great numbers of people gathered within them. Here, ceremonies were performed by priests and scientific research carried out. All aspects of Maya life were shown in their ceremonies: agriculture; science and art; and religion.

The Maya Calendar

The Mayas developed a calendar much more accurate than the one we use today. The year 200 A.D. is the first date in Maya history, which was 1300 years before the Europeans developed a calendar. (Our present calendar is based upon the European calendar.)

The Maya year was divided into 18 months of 20 days each for a total of 360 days. In addition, each day was represented by one of their gods. So whenever a date was written on a sculpture or a temple, they used the symbol for the god for that particular day instead of using number symbols. The Maya pictured time divisions as heavy loads carried on the shoulders of their gods (Figure 10).



Quetzalcoatl as Venus God (Figure 10)

Many other Indian tribes besides the Mayas have been interested in recording their own history. The Indians of the Valley of Mexico had a calendar almost as elaborate as that of the Mayas. In Arizona among the Pimas there were men who kept records of important events that happened during their lifetime. Each year these men carved signs on a wooden

sahuaro rib. The keeper of the calendar used these signs to remember the sequence of events whenever he told the history to the people. Sometimes a man would hand the calendar over to his son, that it might be continued after his death. (Figure 11)

Pima Calendar Stick
(Figure 11)

The Ritual Calendar

In addition to a calendar year, Mayas observed a ritual year. It was made up of 260 days. Some days were thought to be lucky for birthdates, others unlucky. Once every 52 years, the sacred year of 260 days and the real year of 360 days came together. This was a very important occasion when many ceremonies were performed. Ceremonies were also associated with the end of each year and the end of a 20-year cycle.

The ritual calendar was important in Maya religion, as well as in ceremonial life. It was concerned with the well-being and prosperity of the people, setting the proper time for farm work (planting and harvesting) in relation to the movements of the stars. It placed people's lives in the scheme of time. A Maya child was given a special name taken from the particular day on which he was born. This determined his place in the ceremonies as a man, when he could marry, and other things about his life.

The Maya Number System

Maya scholars gave much thought to the passage of time. They observed the movements of the stars in

the day and night throughout the year. In this way, they measured time even as is done today. The movements of the stars are very complicated, and they have to be measured in large numbers. In order to record their measurements, the Mayas needed, and developed a way of writing numbers.

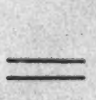
This is how the Maya number system worked:

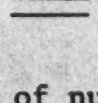
a dot . meant 1

a bar ___ meant 5

an empty space meant 0

Example:


meant the number 6 (adding 5 + 1)


meant 9 (5 + 4)

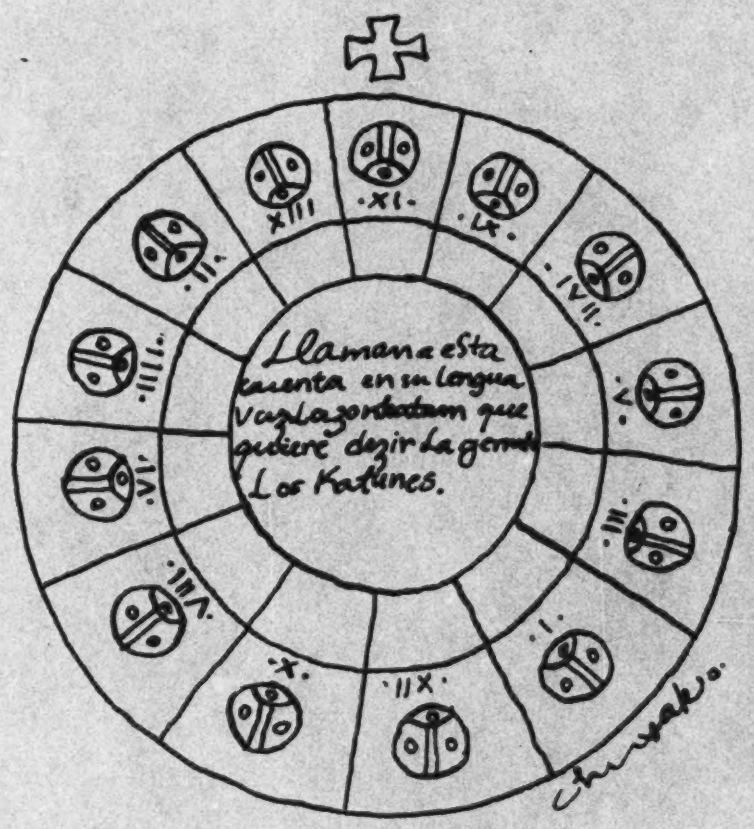
meant 10 (5 + 5)

This system of numbers is called a "vigesimal" system. The Maya vigesimal system was based on 20, with the zero coming after the 19 in the number 20. The Mayas and the Indians of India were the only two peoples to discover the idea of the zero. (Our system of numbers is a "decimal" system, based on the number 10, with the zero coming after the 9 in the number 10.) This is the way the two systems progress:

Decimal System	Vigesimal System
1, 10, 100, 1000, 100,000,	1, 20, 400, 8000, 160,000,

The Katun Wheel

The Mayas thought that time had no beginning and no end but that it went in cycles. At the end of the cycle, it would start all over again. The design below shows the way the Mayas pictured the passage of time. Each division is a Katun which is a period of 20 years. (Figure 12)

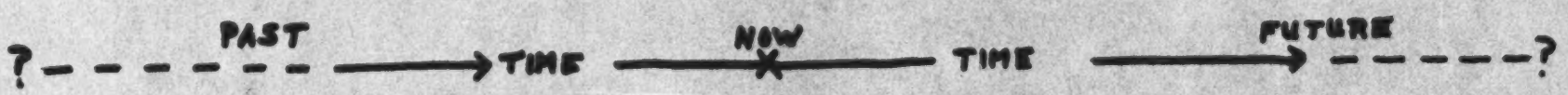


Katun Wheel

(Figure 12)

The cross indicated the present. When all Katuns have gone by, the present time begins again.

On the other hand, European ideas about time are based on a past, whose beginning we cannot discover, moving into a future, whose ending we cannot visualize. Both past and future are infinite.



Beliefs About Time

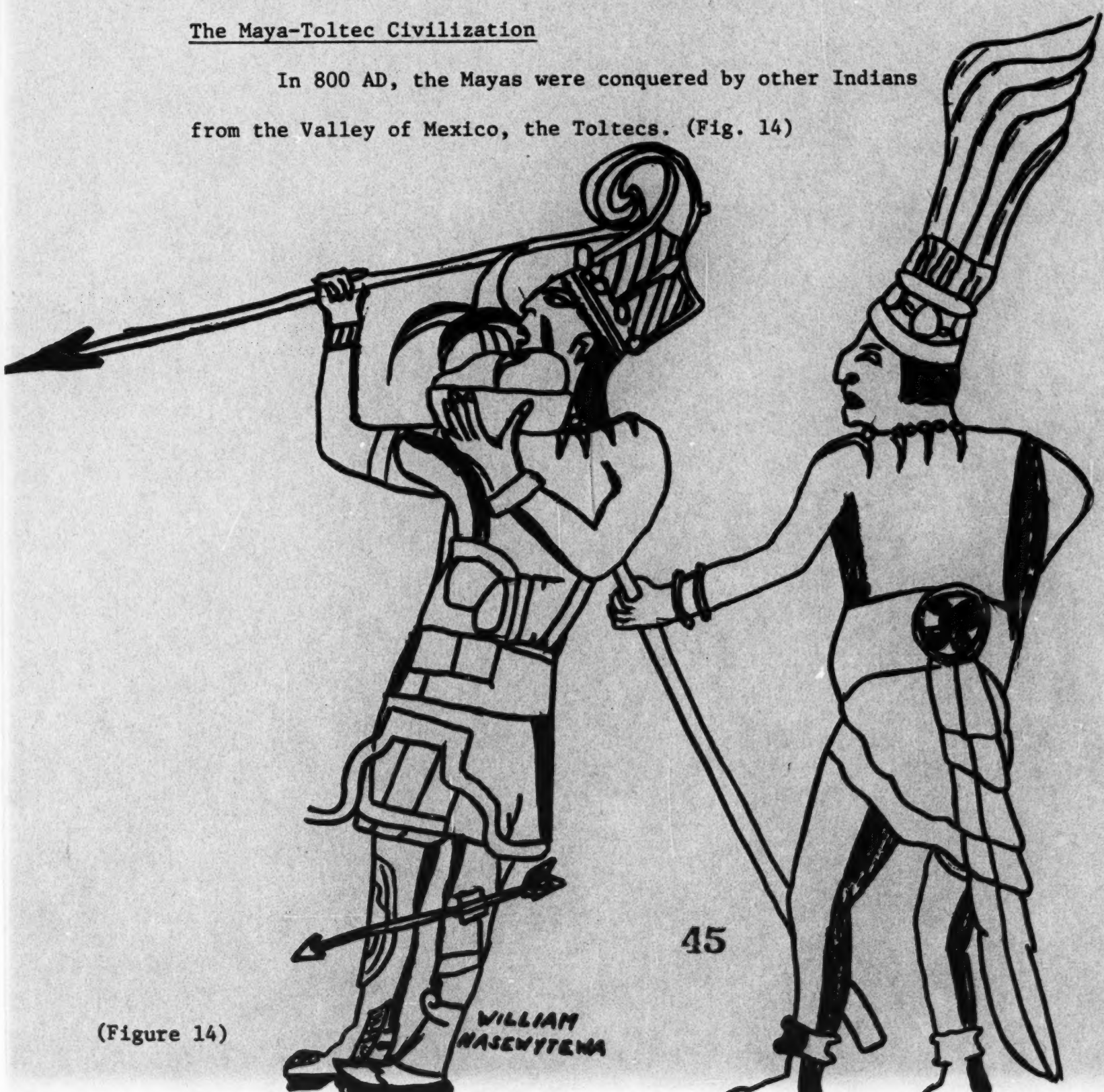
Like other Indian tribes, the Mayas believed that agriculture and astronomy were related. The Mayas observed how living things (people and plants) change constantly and how the stars always move across the heavens. They thought these changing and moving things were related in some way. They believed birth and death and the growing and harvesting of crops were all tied together. (Fig.13) The special events of Maya history were related to the changing of the day into night, the changing of the seasons, and the movements of the stars through many years.

(Figure 13)

The most important ceremonies of the Mayas were about the passing of time. They believed that things that had happened in the past would happen again. For instance, they believed that the world had been created and destroyed many times. Once, the world had been destroyed by water covering the land. Many other American Indian tribes, including the Pimas, shared this belief of world destruction.

The Maya-Toltec Civilization

In 800 AD, the Mayas were conquered by other Indians from the Valley of Mexico, the Toltecs. (Fig. 14)



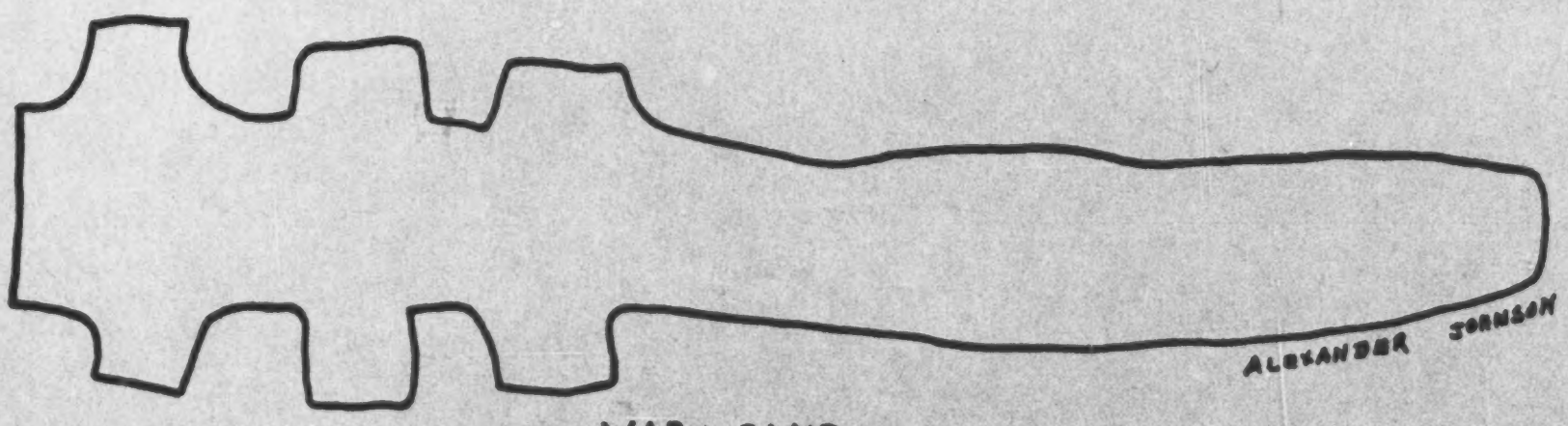
(Figure 14)

After the conquest, the conquerors, who were warriors not intellectuals, greatly influenced Maya civilization. Thus, the peaceful Mayas began the practice of human sacrifice and built a "temple of the warriors" at a place called Chichen Itza. From here, the Toltec conquerors ruled the people for almost 700 years.

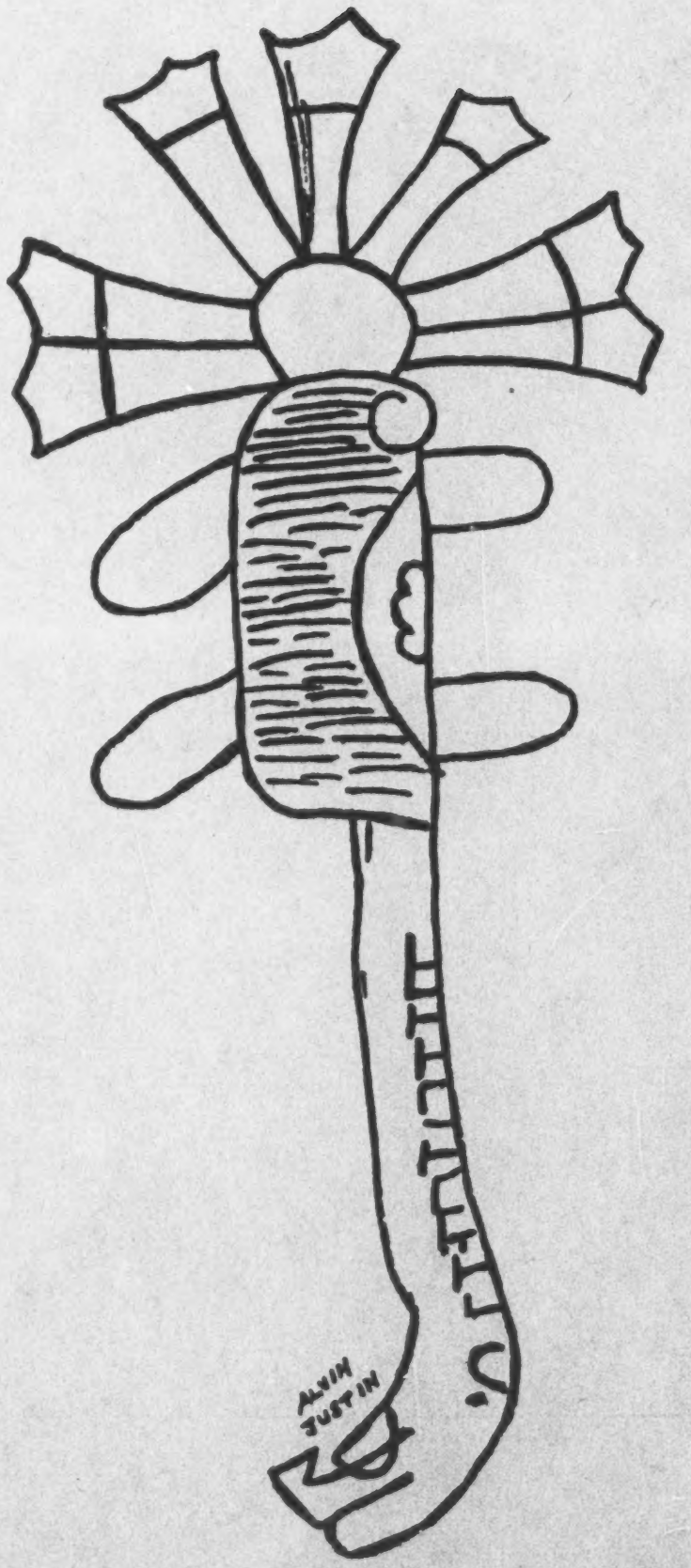
The Spanish Conquerors

In 1500 AD, the Maya-Toltec Civilization was conquered by the Spanish, who totally destroyed their culture. Being Europeans, the Spanish conquerors believed that the rituals of the Maya-Toltec people were the work of the devil. Therefore, they tore down their temples and burned their books. Many of the priests and chiefs were killed and with them died the knowledge of the people.

Throughout the years, civilizations have been created and then destroyed because of conflicts between groups of peoples. There are many similarities between Maya culture and some American Indian cultures of today.



WAR CLUB



THE MAYAS

TEACHING UNIT

UNIT II -- ThE MAYAS

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Locate the Mayas in Time and Space; establish the time period.	The dates for the beginning and end of Maya civilization should be given; what are they? However, the most important fact to stress is that the Mayas built their civilization upon the discoveries of earlier peoples and cultures (i.e., after the beginning of agriculture and the establishment of village life discussed in Unit I, Prehistory.)	Student Booklet, Prehistory, p.2.
Establish the geographical situation.	Yucatan's jungle climate was unsuited for the development of agriculture. For this reason, the Maya agriculture developed from the agricultural discoveries spread from other people who lived in semiarid climates.	Map and pictures of Yucatan. Visual Teaching in Mexico, Sacaton Library.
Establish the Maya culture as an Indian culture.	Basic aspects of Maya culture are similar to those of present Indian cultures: food and food preparation, mode of dress, building techniques, games, ideas of property, time, history, and man's place in the Universe.	Student Booklet -- Unit II, the Mayas, p. 2.
1) Show essential unity and similarity of Indian cultures.	Although Mayas may seem different from Indian groups in the United States, actually the two cultures are very similar. For example, a 19th Century Pima transported into an ancient Maya village would have felt more at home than in an English village of any period.	Slides 13, 14, 15, 16, 19, 20. Transparencies 8, 9. Pima and Papago Indian Agriculture, p. 141-144 Papago Indians and Their Relatives, the Pima p.42
2) Differences of village life and city life separate the modern Indian from his own ancestors, as well as from the ancient Maya. Explain that Indians have the same potential for scientific achievement as other races. Compare Maya achievements with those of other Indian tribes; e.g., the Pimas. The calendar makes a good example. Ask students to bring to class any information they have at home about Pima calendars.	Nineteenth Century Pimas, like the Mayas, lived in villages and provided for most of their own material needs. Today, the Pima, unlike his ancestors and the Mayas, often dwells in cities and is less self-sustaining. Example: The Mayas independently acquired some very difficult concepts: writing; the invention of the zero; and a calendar. Both the Maya and the Pima calendars were based on lunar and solar cycles. The Pimas however, divided the solar year into lunar months starting each year new, and noting the changing seasons pass. The Mayas,	Student Booklet -- Unit II, the Mayas, p. 1.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Comparing Maya achievements, (continued.)	who considered the cycles more important than the seasons, based their calendar on continuous cycles covering hundreds of years from the past on into the future. They observed the stars carefully, calculating past and future astronomical events.	
Compare the Maya with the Pima development of writing and keeping historical records.	The Mayas developed a writing system that everyone could understand, which means it can be considered "true" writing. They used these symbols and signs to write books and keep historical records. Their history was recorded in stone stelae by carving dates and events primarily concerned with gods and rulers. Although only partly understood by modern archaeologists, they can still be read today.	Student Booklet Unit II P. 10, 11, 12.
Ask students to bring to class any information they can find at home about Pima signs and methods of record-keeping.	The Pimas used a writing system that only the writer could understand, which means it can not be considered writing. In each village one man kept a record of the year's happenings, carving signs and symbols he made up himself on a piece of sahuaro ribs. Only he could read them, so when he died, the history ended. Some Pima records covered 60 or 70 years of history.	Student Booklet, Unit II p 12 Slide 20 Papago Indians and Their Relatives, the Pima. p.41.
Compare the counting systems of Mayas and Pimas, pointing out how writing and science increase our capacity to observe and remember. Ask students if they khow the Pima words for different numbers.	Possibly, the early Pimas could count up into the hundreds, but when Spanish terms began to be used, Pima terms became lost. They did count at least up to ten, though, as the Pima word for ten means "all the fingers". Counting was used primarily in gambling and keeping time. Since it was sometimes necessary to use high numbers in gambling, Pimas exchanged kernels of corn to count up into the hundreds. Customarily, Pimas would set a date four days ahead. When it was necessary to extend this time, they made notches on a stick, or tied bundles of small sticks together designating the proper time. Food was not coumted, but measured by the basketful	Student Booklet. Unit II p. 11, 12. Papago Indians and Their Relatives, the Pima, p. 41

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Comparing counting systems, continued.	While both Pimas and Mayas were concerned with precisely recording events, Pimas kept their records for only one year or one generation. Mayas, however, wanted to record all of creation, past, present, and future. Therefore their system was more complex than the Pimas', enabling them to count to very high numbers and perform many mathematical operations.	
Unit Project: Make models of Maya Temples, sculptures, pottery, or fashions (clothes, jewelry, head styles).	Encourage the students to become familiar with a type of artistic presentation very different from the western style. If they observe the details carefully they will emerge with much information about Maya customs.	All sources in the bibliography may be used. Teacher may use any of her own ideas or delete the Unit Project as she chooses.

UNIT II -- THE MAYAS

Description to accompany transparencies:

T1. (Top) -- Man with a blowgun. The Mayas used spears and clubs, but they also used the blow gun which they had borrowed from the people of South America. The man with the blow pipe is a common citizen. He is very simply dressed with a loin cloth around his waist.

(Bottom) -- Peasants bringing food to the priests. A Maya peasant produced more food than he and his family could use. This extra food was distributed to the priests and scholars. The priest sits on a platform and has the most ornate headdress. The helper of the priest counts the food in the basket.

T2. Maya priest gives orders to warriors or hunters. The priest sits in the Temple. Note the steps leading up to the temple and the richly carved roof of the temple. The lines that come out of the mouth of the priest are words. The servant of the priest standing on the steps is the one who is actually speaking to the warriors. The warriors are armed with spears and spear-throwers. Note that everybody wears very elaborate headdresses.

T3. These are some of the symbols for months or days in the Maya calendars.

T4. A more complicated way of writing a date was to depict the gods or events that characterized that period of time. This figure shows two dates: 1) year, 7 reed - day, seven reed (The "reed" is depicted at the top of the picture and resembles an arrow; the "seven" is shown by the seven small circles.) 2) days, 9 wind, 1 reed (Inside the cave the "wind" symbol is shown and nine small circles; one reed is below the wind symbol.)

Transparency description (cont.)

T5. Some of the dates could become very complicated, almost like stories. Here there are three dates. Above, the Venus god is carrying the sky on his head. The time is the wet season, so it is depicted like a stream where birds are floating. Underneath the water are stars shown like ribbons.

T6. These are more dates. All these illustrations came from the few Maya books that are left. Note the headdresses of the people and the nose ring ornament. Also note how the numbers are again indicated by lines of dots.

T7. This shows more dates. From these dates we can also learn about aspects of daily life. In the top part are shown altars. In the lower part we see a priest in a temple giving orders to two people weaving ponchos.

T8. Here are two more dates. One shows the eight heavens divided between night (moon) and day, (dark sun). The offerings rise from the altar below where the fire is burning, and go up to heaven. On the right are two solar disks very similar to the way Aztecs depicted the sun.

T9. This shows picture writing in Arizona. The circular design brings to mind the solar disks and the cycle of time of the Mayas.

UNIT II -- THE MAYAS

Description to accompany slide presentation:

1. Maya Pyramid -- the typical Maya temple was built on a platform made of earth. Many steps led up to the temple, the roof of which was very ornately decorated with stone carvings.
2. Another Maya Pyramid.
3. Maya palace made out of stone and very elaborately carved.
4. Maya date from a stone stela.
5. Stone masks carved out of stone probably of priests. Notice earrings and nose rings.
6. An important person goes on a trip. He is carried on the shoulders of his servants and followed by warriors. The warriors are holding clubs, and wear loin cloths and earrings.
7. Maya methods of carrying loads.
8. The carved stone circle shows a man playing a ball game. He is hitting the ball with his hips. In this game it was forbidden to touch the ball with the hands or feet. All around the border is writing.
9. Earliest Maya date carved on a jade pendant.
10. Sun god of clay.
11. Corn god carved in stone, with headdress resembling corn tassels.
12. Corn god. Corn was always depicted as a young man.
13. Man planting field with digging stick. Note the loin cloth, the sandals and the fancy hairdo. The second man is drinking out of a gourd. In the background is the thick vegetation of the jungle.
14. Pima agricultural tools. Note the digging stick (D).

Slide Description (cont.)

15. Woman grinding corn on a stone, baskets and pots.
16. Pima women grinding corn. The stone and the position are almost the same as the Maya.
17. Maya house (modern). This is probably the same as in ancient times. Walls are made of sticks and mud and covered with plaster. Roof of straw slopes sharply to shed off the water.
18. Gold necklace.
19. Circular designs on rocks found on Pima Reservation.
20. Pima Keeper of the calendar record. The signs are carved on a piece of cactus rib.

UNIT II -- SOURCES

Castletter and Bell, Pima and Papago Indian Agriculture, University of New Mexico Press, Albuquerque, New Mexico, 1942.

Slides: Maya slides 1 through 20.

Student Booklet, Unit II

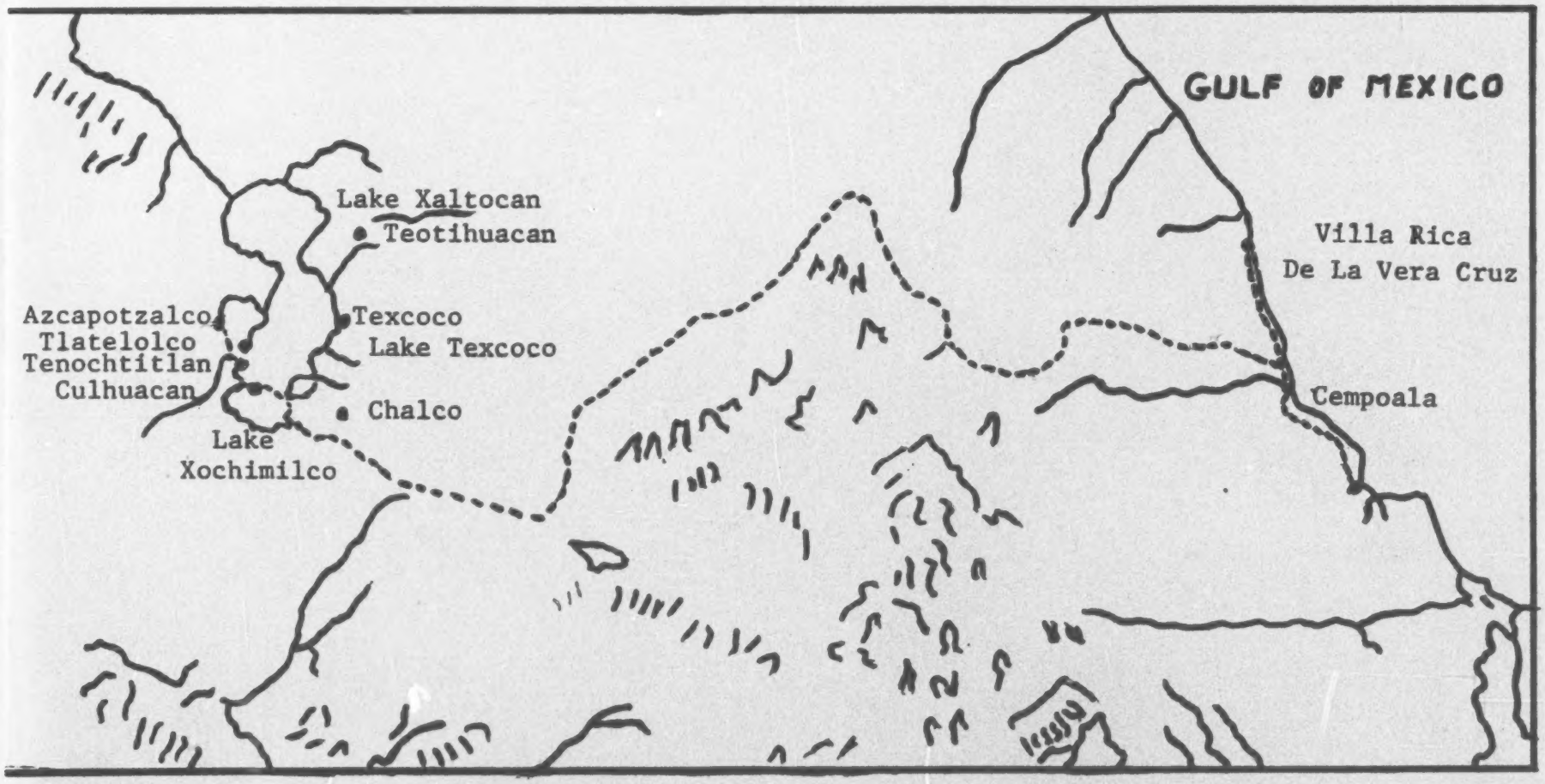
Transparencies: T-1 through T-9.

Underhill, Ruth. The Papago Indians and Their Relatives the Pimas, U. S. Department of Interior, B. I. A. Branch of Education. Washington, D.C. 1941.

Visual Teaching in Mexico, Fideler Visual Teaching, Grand Rapids, Michigan.

PEOPLE OF THE VALLEY OF MEXICO

In the Central Valley of Mexico a large Indian population lived on the shores of Lake Texcoco. These Indians borrowed many ideas from the Mayas, such as writing and counting. In addition, they built irrigation systems surrounding the lake which caused large cities to develop. Soon these people had conquered many other tribes and were governing a large empire. This empire was later overcome, first by the Toltecs, then by the Aztecs. Finally it was destroyed completely by the conquering Spaniards, led by Hernando Cortez (Figure 1).

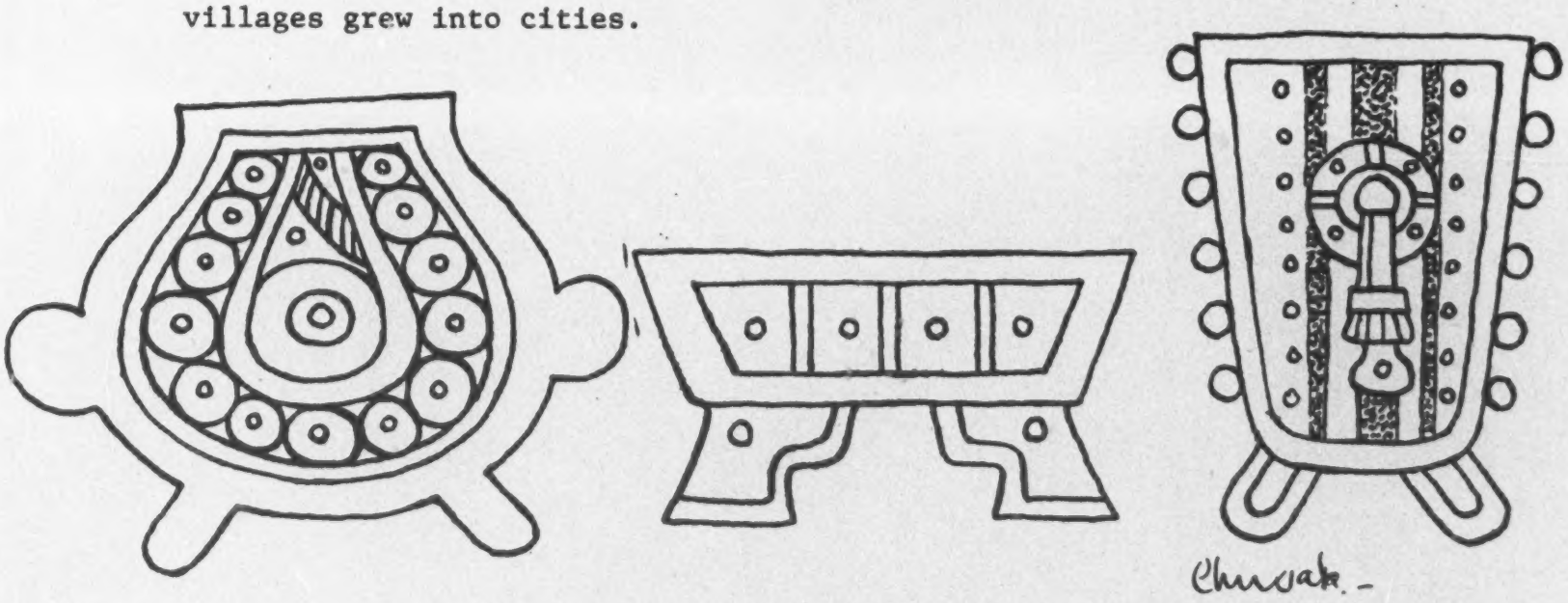


----- CORTEZ'S ROUTE

(Figure 1)

Agriculture

It was in central Mexico, long before these empires began that early Indians first learned to grow plants. In this semi-arid land several tribes of people lived for thousands of years in small groups and villages. Their farming methods became better and better so they had a variety of foods. Many different types of pottery were made for use in cooking these foods. About the time the Mayas built their first temples, the people in Central Mexico were becoming very skilled at agriculture. For this reason, they became rich enough so that their villages grew into cities.

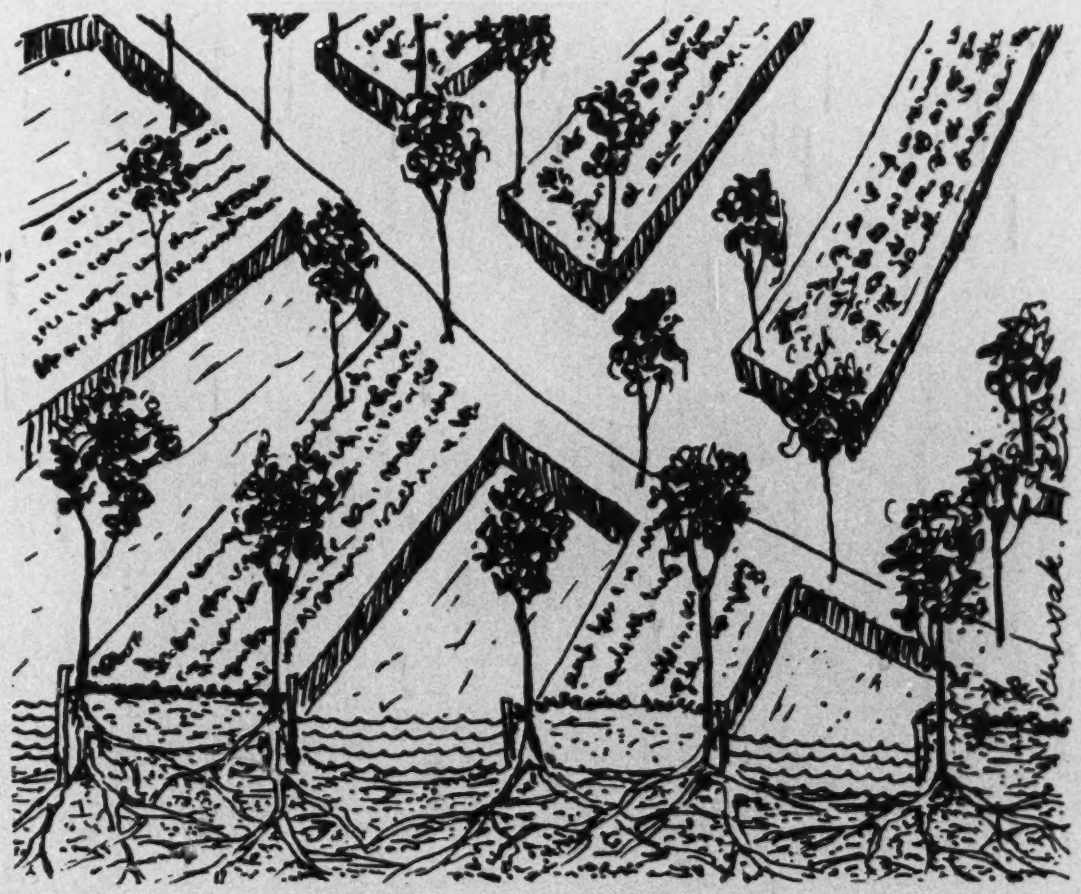


(Figure 2)

In the Valley of Mexico, the rains came only at certain times of the year. Some years had much more rain than others, but there was always the problem of finding enough water to grow the crops. In the middle of the Valley of Mexico, however, there was the huge lake called Texcoco. This lake was a source of wealth since it was surrounded by marshes with many birds and fish, providing a rich food supply. The

lake was also a good water source and tribes who had land close to the lake were better off than the people who lived farther away. Lake Texcoco had enough water to support many cities. The largest and most important of these cities in the Valley of Mexico was called Teotihuacan. By the time of the Spanish conquerors, millions of people lived in cities around the lake.

Man-made islets called "chinampas" supported several crop plantings per year for the Aztecs.



(Figure 3)

The Empire and the Emperor

The system of government that developed in Mexico was first a "city-state" which later became an "empire." In the city-state, each tribe (or city) was independent. Cities came into conflict, however, and one would be conquered by another. After a time, one city ruled over the whole valley. This was the beginning of the Empire. The empire included people of different tribes, languages, and customs,

all ruled by one king or emperor. In Mexico, this emperor directed the government, ruled over the tribal leaders, and headed the army. In exchange for government protection, the people worked for the emperor. In the same way, people today give part of the money they earn to the government in the form of taxes.

Problems of governing became complex because the dry climate forced many people to live near the lake. Government, under these crowded conditions, became more organized than that of the Mayas. Besides the usual governing tasks, the lake cities had two important worries: 1) making the best use of its water; and 2) keeping other tribes away from the lake. The government controlled the water by having people build irrigation ditches. Then they regulated how much water each person could receive for his field. The government also formed armies to keep others away from the water and to conquer enemy cities nearby.

The emperor lived in the most powerful city, and conquered cities sent him food as tributes. Once a year before the harvest, when food was scarce, the emperor distributed this food among the people of his city. A generous emperor gave away all the food. A stingy one kept as much as he could for himself and his court. (Figure 4)

(Figure 4)

Other Leaders

The members of different tribes in the empire were not independent like the Mayas but lived together in cities. Each city was governed by a prince who, in turn, obeyed the emperor. The prince made all the decisions without consulting the people. The people had to obey their leaders, however, or they were killed or made slaves.

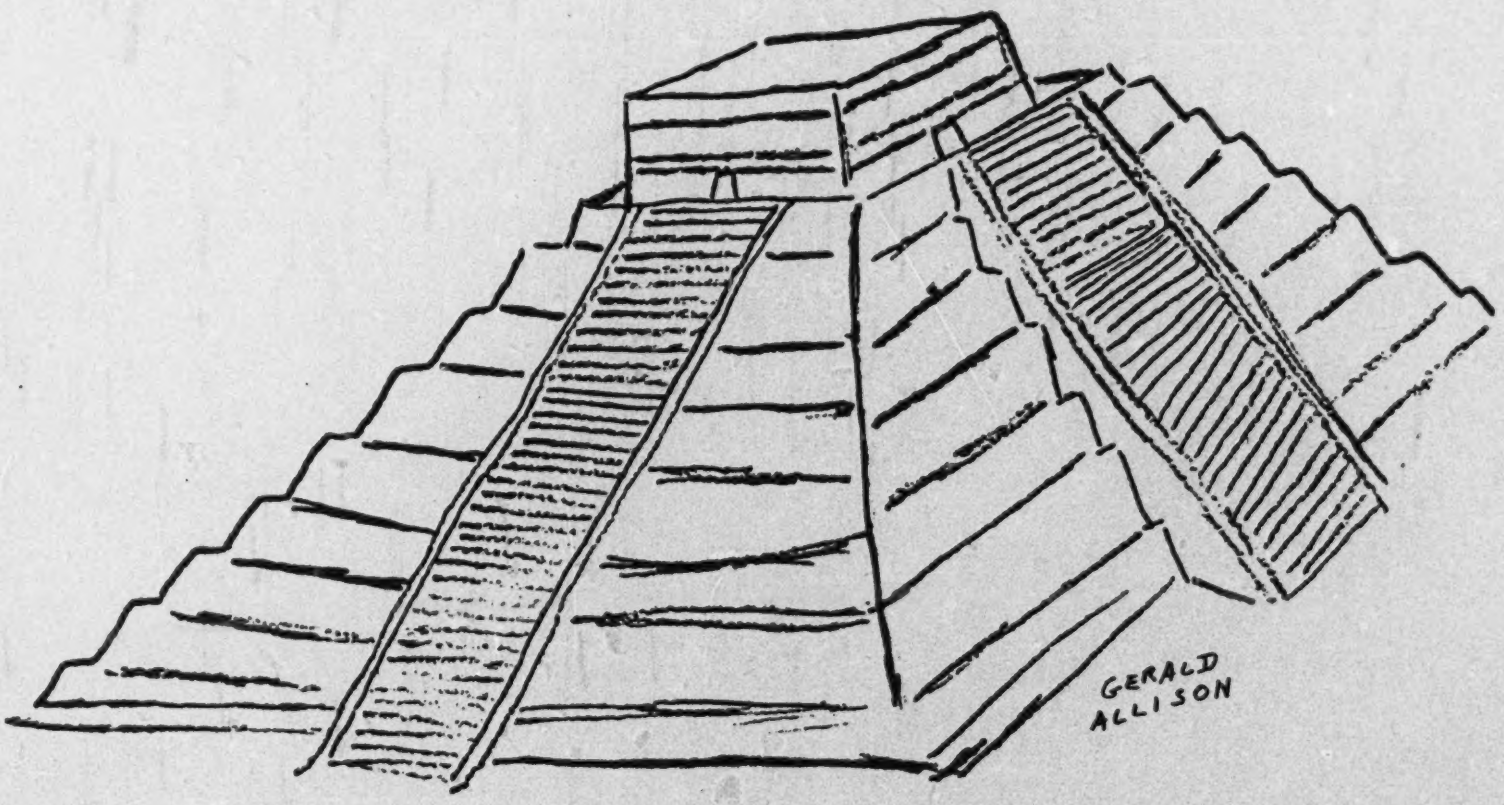
Warriors Slaves

(Figure 5)

City Life

As the cities grew larger and there were no more small villages, life became more complex due to many people living close together. Around the year 300 AD, the most important city near Lake Texcoco was Teotihuacan. This and other cities in the valley had beautiful plazas in the center. Around the plazas were temples of the gods, and palaces of the leaders. These palaces and temples were made out of stone or of adobe that had been plastered and painted all over. The common people lived in simple adobe houses which were arranged along

streets. These people helped build the palaces for the leaders by contributing a certain amount of their labor to building. (Figure 6) In return, before harvest-time when food was scarce, the emperor would distribute to the people the food from the conquered cities.



Toltec Temple (Figure 6)

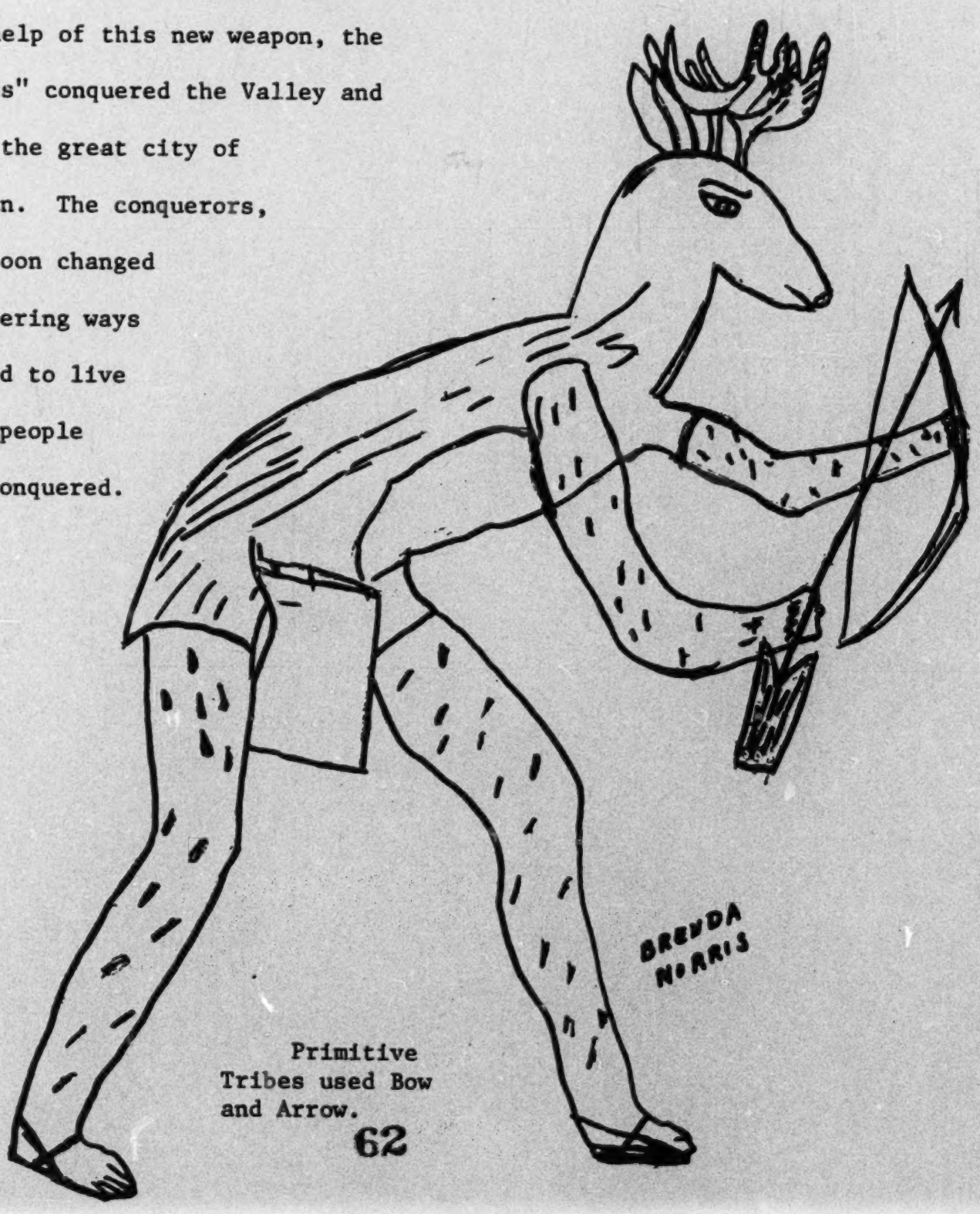
Primitive Tribes

In the mountains around the Valley of Mexico and to the North lived many tribes, who did not make as much progress in agriculture and lived a more "wandering" way of life. They had little water and, therefore, could not farm. They lived the same way their ancestors had always lived -- by hunting, and gathering the seeds of mesquite, cactus and yucca. Also they often raided their wealthier neighbors. One of these Northern tribes suddenly moved down to the Valley of Mexico and conquered the cities by the lake. The people of this tribe called themselves the "Chichimecs" which means "The People of the Dog Lineage." Their legendary leader was named Quetzalcoatl which means

the "plumed serpent." Quatzaccatl was a warrior and a medicine man. Later when he grew old, other medicine men became jealous and tricked him into getting drunk. Then they killed him.

The "Dog" people were very good fighters but they had one important advantage over the lake-dwellers. Where the People of the Valley of Mexico knew only the spear and spear-thrower, as did the Mayas, the primitive tribes used the bow and arrow as well as shields. (Figure 7) With the help of this new weapon, the "chichimecs" conquered the Valley and destroyed the great city of Teotihuacan. The conquerors, however, soon changed their wandering ways and learned to live like the people they had conquered.

(Figure 7)



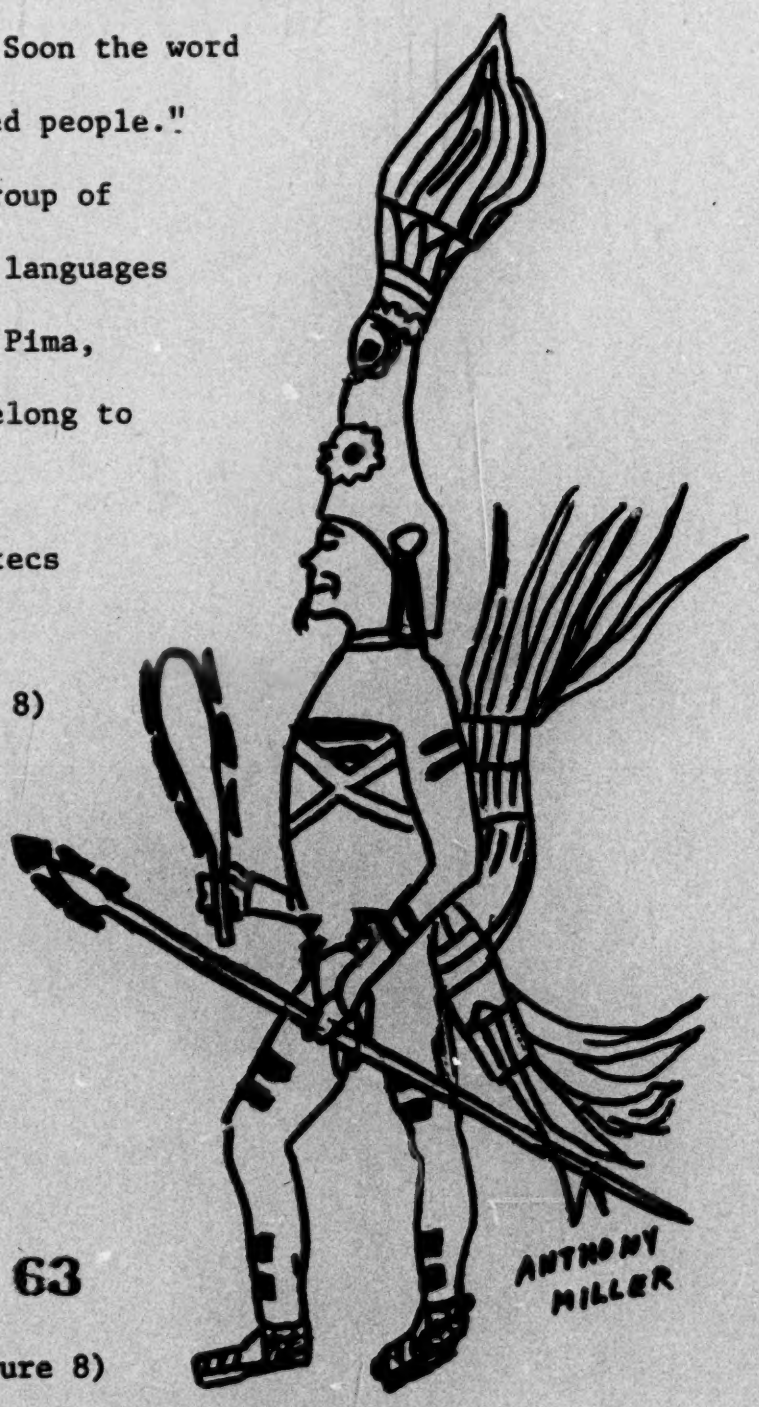
Primitive Tribes used Bow and Arrow.

They built their own city by the lake and called it Tula. They became rulers of all the other people in the Valley.

Toltecs

The "Chichimecs", after settling in the Valley around the year 900 AD, made many cultural advances. They adopted the calendar and built their own temples and palaces. They also brought their gods and their religion into the Valley of Mexico where they became mixed with earlier beliefs. They began writing their own history, and at this time they changed their name to Toltec. Soon the word "Toltec" took on the meaning of "civilized people." The Toltec language belongs to a large group of languages called "Uto-Aztecan." All the languages in this group have something in common. Pima, Hopi, Ute and Aztec are languages that belong to this "Uto-Aztecan" group.

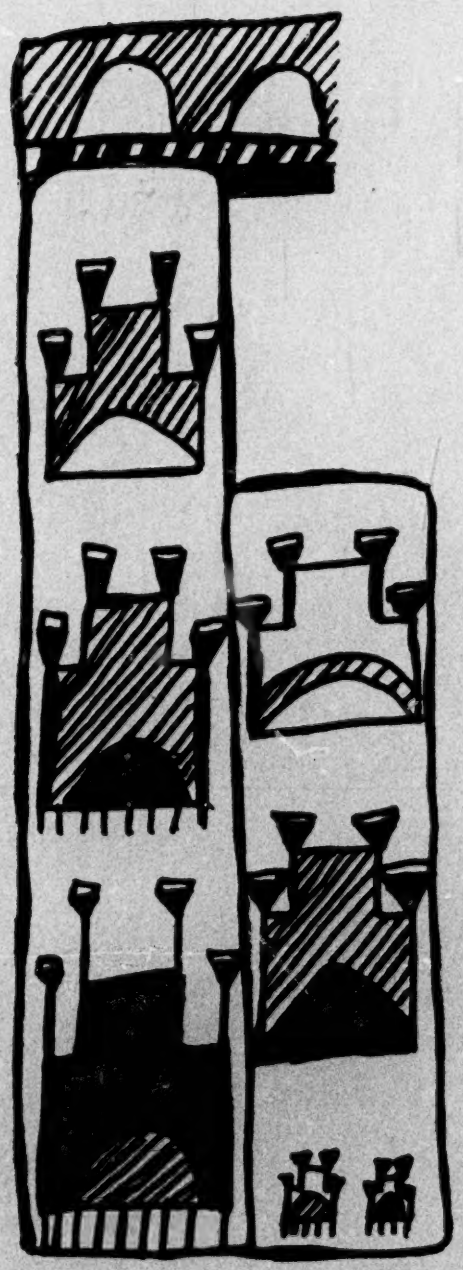
During the next 300 years the Toltecs sent their armies of soldiers and their traders all over the Indian world. (Fig. 8) They conquered the Maya cities and sent traders all the way to Arizona where they influenced the Hohokams. The Toltecs also conquered the Mayas and learned the Maya ideas about time. These ideas included the belief that time went in cycles and that there were many different destructions



(Figure 8)

Toltec Soldier

of the world. At the end of any time cycle, particularly the 52-year cycle, all the fires were put out and there was a period of mourning for two days. During this period, people were afraid that the time for world destruction had come, and that the sun might not come up the next day. At this time human sacrifices were made to the gods to feed them and to renew their power and also to insure that the sun would rise the next morning. Usually the people who were sacrificed were war prisoners. Sacrifices were made by the priests.

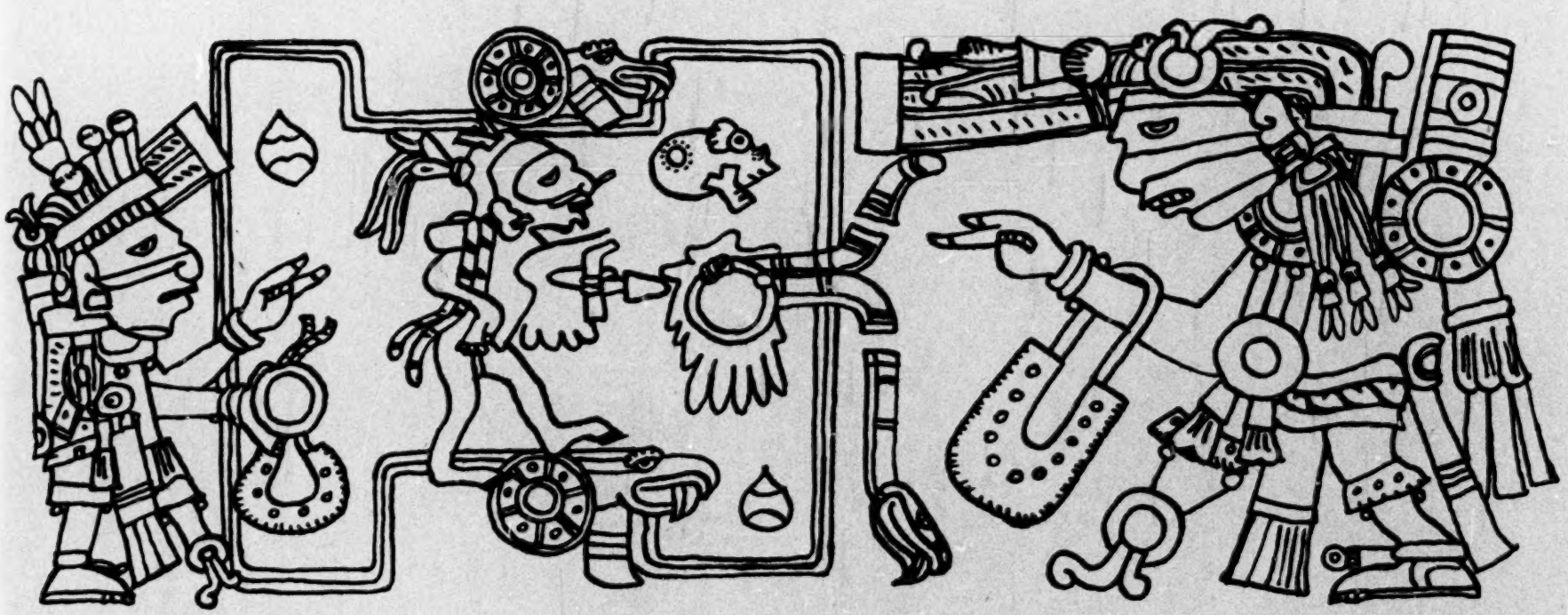


(Figure 9)
Toltec Design

The Toltecs believed in a heaven where all people would go if they lived a good life and served their city. They also believed that all warriors who died in battle went straight to heaven as well as all women who died in childbirth. Heaven, to the Toltecs, was a beautiful garden where people just walked and sang the whole day. This idea may have been based on the admiration of the people for the gardens of the priests. These gardens were beautiful places with little rivers, many fruit trees and exotic birds that had been brought from distant lands by traders.

Another aspect of Toltec religion was the ball game which was played on large ball courts. These games, played with a rubber ball, were partly religious and when one city played against another, many rituals and ceremonies

were involved. Sometimes two cities would play a game of ball instead of engaging in a battle. The loser of the game would then lose their lands, or perhaps become slaves to the winner. (Figure 10)



Chureh

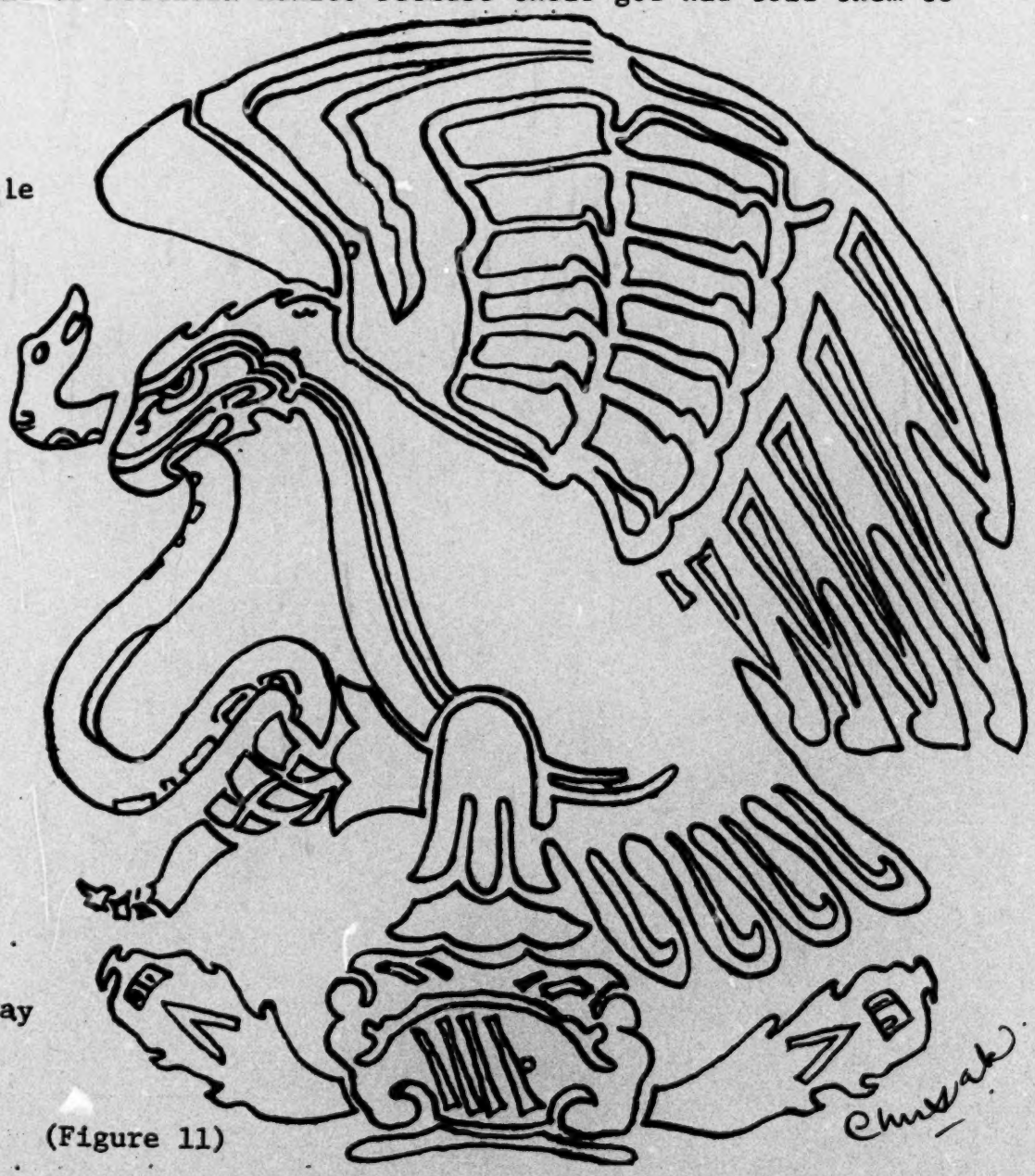
Toltec Ball Game

(Figure 10)

During the time of the Toltecs, the Hohokams were influenced by wandering Toltec traders. The big Hohokam city of Snaketown was built during this period. The Hohokams also had a large ball court at Snaketown, and knew of the beliefs of the Toltecs. Since they did not leave a written history like the Toltecs, however, we cannot be sure of Hohokam beliefs. We do know that copper balls and gold ornaments found at Hohokam ruins must have come from Toltec traders.

Aztecs

In the thirteenth century AD another primitive tribe came into the valley and conquered the cities by the lake including Tula, the Toltec city. These people, called Aztecs, had left their tribal homelands somewhere in the mountains of Northern Mexico because their god had told them to leave. The god had told the Aztecs to wander until an eagle appeared to them. The eagle would be sitting on top of a cactus in the middle of waters devouring a snake. (Fig. 11) The Aztecs followed the command of their god. When they came to the Valley of Mexico they were despised and chased away by the other tribes there because they were wild and the people of the Valley were civilized. They finally found an island in the middle of the lake where nobody else wanted to live. There on the island an eagle appeared to the Aztecs and sat on a cactus, just as the god had predicted. The year was 1325.



(Figure 11)

The Aztecs remained on the island but the people of the cities still despised them. Little by little, however, the Aztecs started to build their

own city on the island, and they set out to conquer the other people all around the lake. By the year 1428 they had conquered all of the cities and had become the rulers of the empire. All other people had to pay taxes and tributes to them. The little city of the Aztecs called Tenochitlan became very rich and big. It was connected to the mainland by several bridges called causeways.

The Aztecs were very fierce warriors who killed their war prisoners as a sacrifice to their gods. They asked heavy tributes from the people they conquered. This included all kinds of food, clothing and precious stones. Since the city of the Aztecs was built on a small island, there was not much room for farming. The tributes were partly used to feed the people as well as the army. Other tributes were used to decorate and enrich the palaces of the Emperor and the priests, as well as temples of the gods. Because of these tributes all the other cities hated and feared the Aztecs, (Figure 12).

(Figure 12)

Aztec Daily Life

The clothing of the Aztecs was quite simple, with some differences between the "common" people and the "upper class" people. The men wore a cotton cloak that was rectangular and tied over the right shoulder or at the chest, (Figure 14). Cloaks were usually painted with very bright colors, and were woven from cotton brought in by traders from tropical lands. Under the cloak the men wore a simple apron of cloth. The women wore a plain white shirt, although "upper class" women also wore a blouse, (Figure 13). Both men and women went barefooted, though the "upper classes" sometimes wore sandals. These sandals were of many different varieties. Some were made with precious stones, some from the skins of wild animals like the jaguar, and some from feathers of tropical birds.

(Figure 13)

Cleanliness was considered a virtue and children were taught to bathe in the lake, to wash and clean their mouth daily, and to keep their clothes clean. Children were also cautioned against using paint and makeup to look beautiful. But the girls liked to paint themselves just the same, and used mirrors made of obsidian whenever they were available. Jewels and headdresses were also worn and many were very elaborate. But they were regulated according to the importance of the person, just as among the Mayas.

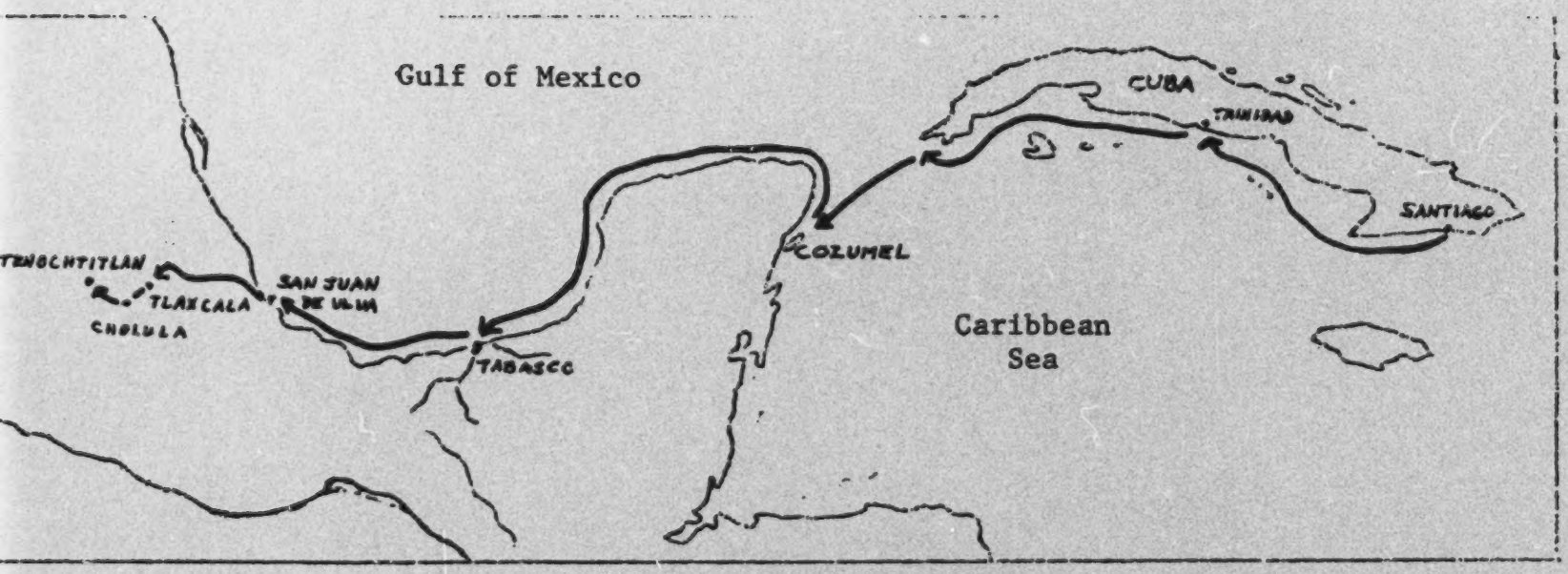
(Figure 14)

Aztec homes were made of adobe walls with straw roofs and walls whitewashed with lime. The

floors were of dirt. Beds were straw mats placed on a low platform and were used during the day as a seat. Family clothes and jewelry were kept in large baskets with lids. The Aztecs had no fear of theft because stealing was practically unknown among them. In the center of the house a wood-burning fireplace, built with three stones, provided heat. In the palaces where there were many rooms, the coals from the fire were put in shallow pans called braziers, and used to warm up places away from the fire.

The Spanish Conquest

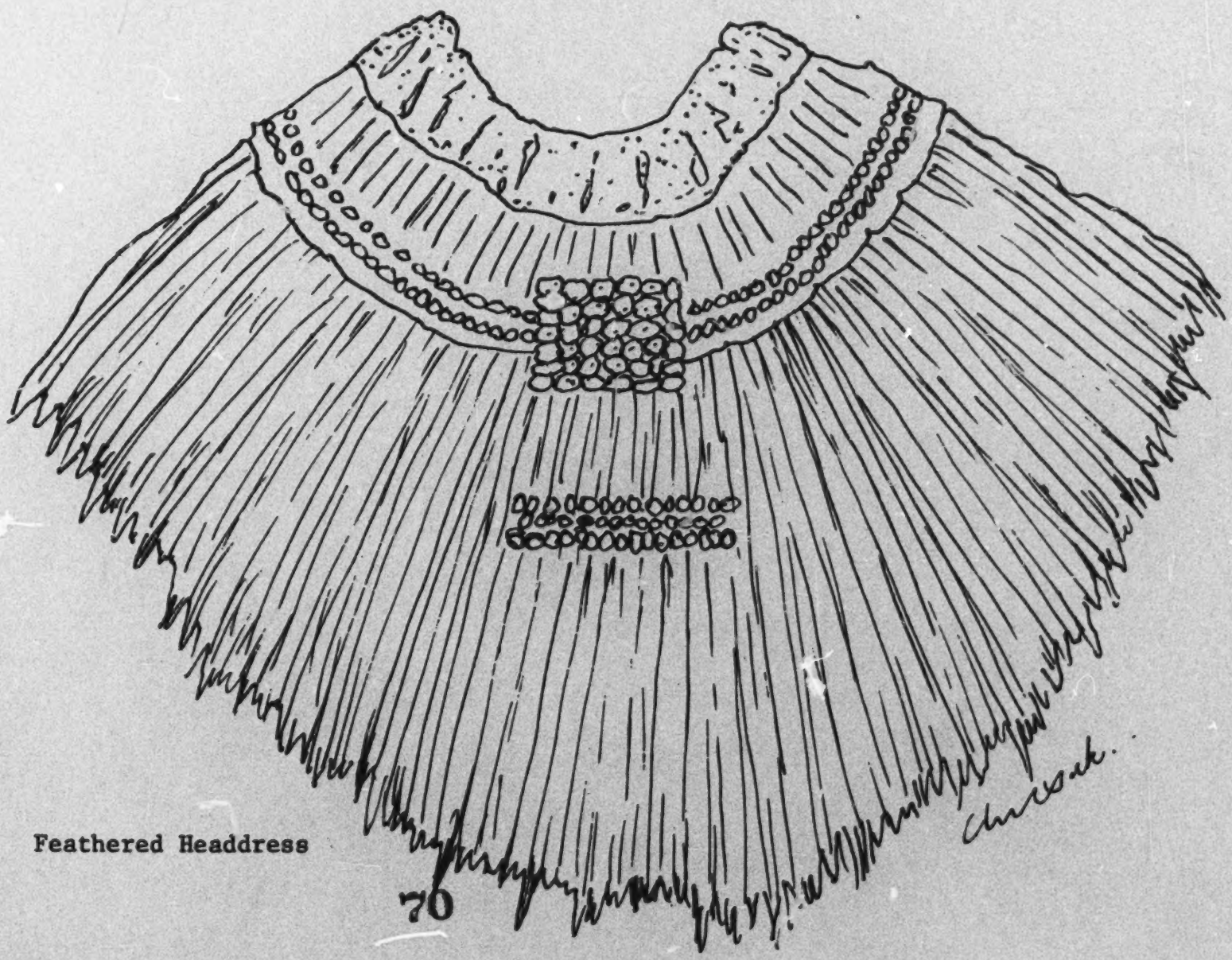
In the year 1519 the Spanish landed in Mexico (Fig. 15). Their leader, Hernando Cortez, had with him armed soldiers and horses. For the people of the Valley of Mexico this year was an important one because it was the end of a 52-year cycle and the priests had predicted that many misfortunes would occur. The horses of the Spaniards frightened the Indians who had not been



Route of Cortés, 1519
(Figure 15)

accustomed to such big animals. The firearms of the soldiers were also a new weapon and could hit at a longer distance than bows and arrows. The Spaniards also brought with them many sicknesses including smallpox. This sickness had not existed in America before and it killed many Indians, more than were killed in battle.

The Spaniards were helped by the fact that the Aztecs had been such cruel masters that other tribes did not feel like cooperating in a common defense. All these reasons contributed to the speed with which the Spaniards stormed the gates of the great city of the Aztecs, Tenochitlan. They captured the Emperor Montezuma and put him to death. The Spaniards destroyed all the temples and the statues of the gods, melted all the gold ornaments, and sent the gold to the King of Spain.



Feathered Headdress

On the spot where the highest pyramid of the Aztecs stood was built a large church, the Church of the Virgin of Guadalupe. This saint later became the Patron Saint of Mexico. Mexico city, now the capital of Mexico, is built on the same spot where the ancient capital of the Aztecs, Tenochitlan, once stood.

The Spaniards were very impressed with the splendor and civilization of the Indians of Mexico. They compared the wealth of the Aztec Emperor to the wealth of the King of Spain. Yet one of the purposes of the Spaniards was to spread the Christian religion. For this reason they destroyed all the books and temples of the Indians so that they would forget their past and be more ready to accept the new ways. Only a few of the books were left and from these few it is possible to learn some things about the Indian way of life before the Spaniards came.

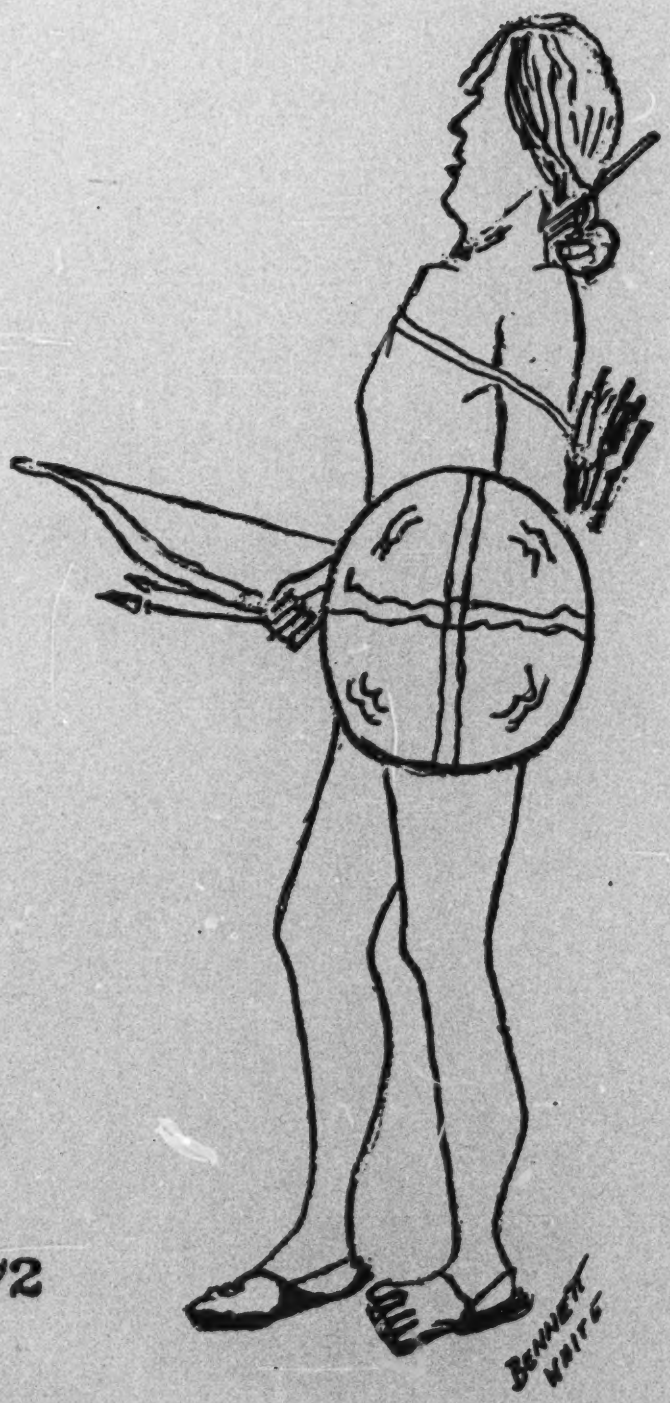
QUETZALCOATL

(from an Aztec carving)
Mexico

BERNADETTE SAIZA

PEOPLE OF THE VALLEY OF MEXICO

TEACHING UNIT



UNIT III -- PEOPLE OF THE VALLEY OF MEXICO

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Compare the geographical features and climate of the Mayas and the Indians of the Valley of Mexico.	The Valley of Mexico is a semi-arid land surrounded by mountains. Lake Texcoco, in the center of the valley, supports a very fertile area. There is much climate variety. Yucatan is a jungle with consistent rainfall, heavy vegetation, and little climate contrast.	Visual Teaching: Mexico, plate 4. Student Booklet, pp. 2,3
Compare the people living in these areas.	The Valley of Mexico supported many different tribes of people, with different languages and customs. Yucatan contained essentially one tribe, the Mayas, who were spread out over a large land area.	
Discuss cultural similarities.	Both groups of Indians developed an agriculture based on corn, beans and squash. Both developed a calendar and a system of writing. They emphasized living in harmony with nature as opposed to the European stress on control of nature.	
Compare cultural development from 0 to 300 A.D. in Yucatan, the Valley of Mexico, and Arizona. This was a period of prosperity and cultural advance all over Central Mexico and North America.	During this time period the following events occurred at about the same time: 1) First big cities (Teotihuacan) in the Valley of Mexico. 2) Beginning of the Maya civilization. 3) In Arizona the first large Hohokam villages were established in the South, and the first pueblo villages in the North. 4) In Eastern United States, large agricultural villages were established.	Indians of the Americas, p. 58. Illus. pp. 34,35.
Discuss this period of prosperity and why it was so widespread.	There are many reasons possible for this widespread prosperity and cultural advance. Civilization is contagious, and when some advances are made in one area, people will learn and adopt them. It is certain that the Mayas influenced the Valley of Mexico and the Valley of Mexico influenced the Hohokam. Since these advances were rapid, however, there could have been other factors involved.	The American Heritage Book of Indians, p.111.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Explain the important events that characterized the following time periods:		
1) 300 to 800 A.D.	This was the time period of the establishment of independent cities. Teotihuacan represented the most important and perhaps the most influential of these.	The American Heritage Book of Indians, p.61. The Epic of Man, p. 218. Student Booklet, p. 5.
2) 800 to 1300 A.D.	The Toltec invasion ended the independence of the cities and began the expansion of their newly formed empire.	The American Heritage Book of Indians, p.62,63 The Epic of Man, p. 220.
3) 1300 to 1519 A.D.	The rise of the Aztecs in 1300 marks the beginning of the third period. The Aztecs tightened the control of the Emperor over the Empire and improved its organization.	The American Heritage Book of Indians, p.72-97
Compare the power shifts during this time period with such power changes that occurred in the western world.	In the West, power moved from Egypt to Mesopotania to Greece and Rome, and finally to France and England. In Europe, however, the center of power moved from place-to-place as well as from people-to-people. In Mexico, the people changed but the place remained the same. The Maya culture was an exception to this shift since they maintained an uninterrupted tradition of cultural continuity.	
Ask students their ideas about the necessity of changes in rule, or power. Is it important for a culture to have new ideas, and new people?	The necessity of this turnover is often expressed in myths, through the idea of subsequent creation. It also has been expressed in the idea of a culture hero who becomes disgusted with his people and brings in a new tribe to conquer them.	Maya student booklet, p.14. The American Heritage Book of Indians, p.63.

UNIT III

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Discuss control of water as one example of problems of government (which includes eventual hostilities and possibly war.)	In the Valley of Mexico tribes who had access to, or controlled, natural resources (mainly water) were wealthy. Tribes without this advantage were poorer, lived more a wandering way of life, and often attacked and raided the wealthier tribes.	Student Booklet, p. 4.
Compare the case of the Pimas' relationship to the Apaches, and their relationship to the Papagos. 1) Apaches represented a tribe with a cultural difference from the controlling tribe, the Pimas. 2) Papagos represent a tribe with a culture similar to the Pimas.	Along the Gila river in Arizona, the Pimas controlled the water, irrigated fields, and maintained a good food supply. Apaches living in the mountains with no water and poor agricultural opportunities, often raided the Pimas, who were wealthier. The Apaches and the Pimas were extremely different culturally. In the case of the Papagos, another tribe poorer than the Pimas but also living in close proximity, there were no raids or hostility. The Papagos, similar in culture to the Pimas, worked in the fields for the Pimas in exchange for food. Because they were related to Pimas through marriage, language and customs, they cooperated with them rather than fighting with them.	Transparency 8. A Pima Remembers, pp. 45-48. The Papago Indians and Their Relatives the Pimas. p. 14.
3) Cultural differences can result in cooperation if two peoples have a common advantage in being allied.	A fourth tribe, the Maricopa, was also an agricultural tribe that lived near the Pimas on the Gila. They spoke a different language and had different customs from the Pimas. Still, Pimas and Maricopas were allied against the more primitive tribes, mainly Apaches, but also the Mohaves and Yavapai. In this case, the common advantage of cooperation between established villages fighting off raiding nomads, was important.	A Pima Remembers, pp. 22-25.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Establish the common origin of language of the Uto-Aztecan tribes (which includes the Pimas) as beginning in New Mexico.	This common language source resulted in similar cultures being developed by all tribes in the Uto-Aztecan group. Other factors influencing the formation of these similar cultures were: similarities of climate and actual historical connection.	Transparency 6.
Suggest a hypothetical problem for the students to discuss. What would have happened if the Pimas had two unfriendly tribes, Maricopa and Apache, both wanting the water supply?	Different situations could have brought about different results. 1) The Pimas might have attacked and conquered the Maricopas since they lived in villages. In this case, the combined forces of the Pimas and conquered Maricopas could easily hold off the Apaches, though they still could not conquer them because they had no villages to conquer, but lived a nomadic life. 2) If, on the other hand, a large group of Apaches attacked the Pimas at the same time the Maricopas decided to attack, the Pimas, with enemies on two sides, might easily be conquered.	
Compare this hypothetical problem with the situation in the Valley of Mexico.	Many different tribes controlled the important water source in the central valley of Mexico during different stages of development. The importance of the resource was the reason for each succeeding force to take over the area. In each case the tribe to control the water resource was the tribe that was able to develop a better civilization.	Student Booklet, p.4 Pima and Papago Indian Agriculture, pp. 158-161. American Heritage Book of Indians, pg. 111 column 2.
Discuss how control over natural resources brings out the necessity for leaders. Leaders, in addition, need an organization or government.	Someone must act as spokesman for the tribe to deal with other tribes, or to lead the defense or offense in battle. A government organization is needed to back up the decisions of the leaders. In all societies the government becomes the spokesman for the people.	
Discuss how leaders can be sure that they represent the will of the people?	The importance of how leaders are chosen...by the people...and how elected, becomes obvious.	

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Explain irrigation as an example of controlling or exploiting natural resources.	Irrigation increases water availability to more people. In effect, it increases the area of agricultural production, which in turn increases food production.	
Discuss the problems involved in constructing an irrigation system.	Construction of an irrigation system requires an organization, many people and much work. A leader is needed to decide the most suitable place to select, how fast the water should flow and where the ditch should be dug. 1) Canals cannot run up hill. 2) Canals cannot be dug through rocky soil. 3) Current cannot be too swift or it will erode banks. 4) Current cannot be too slow or the canal will silt in.	
Discuss the problems involved in administering the irrigation benefits, and the maintenance.	Some leader must decide how much water each person is entitled to and how the canals will be maintained during future years. It becomes necessary, therefore, to choose leaders who will distribute the water fairly. (Importance of good government can be stressed.)	
Explain some probable important results of controlling natural resources. 1) Brings about an increase of efficient distribution and, therefore, increased production. 2) Brings about an increase of conflict between controlling parties. (Efficiency is often obtained at the expense of justice.)	Irrigation in our own valley has greatly increased agricultural production. Conflicts between controlling parties, Anglos and Indians, also occurred in the Salt River Valley, with the result that the original Pima way of life was almost completely destroyed. Point out what the various "utilities" are... electricity, water, sewers, telephones, etc Utilities need an organization to produce and distribute. Need for utilities arises when people live together in large groups and can no longer provide for their needs individually.	A Pima Remembers, pp. 121-126.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Discuss other uses of government.	Government is used to organize people to be more efficient, as in the case of utilities. Government can also be used to protect property and defend the people against outside forces. Government can mediate internal arguments through the establishment of laws. Government can take care of people who are unable to care for themselves. (As in the case of the Aztec emperor's distribution of food to the poor.)	
Discuss the everyday life of the people of the Valley of Mexico.	Life of the people of the Valley of Mexico was similar to American Indian life like the Pimas. Virtues included: Cleanliness in general; ritual cleanliness at certain times such as after killing an enemy in battle or after childbirth; strength and hard work; modesty and simplicity of clothing and furniture; emphasis on body decoration.	Slides, movie, transparencies. Descriptions in student booklet, p.13.

UNIT III -- PEOPLE OF THE VALLEY OF MEXICO

Descriptions of Slides:

1. Pottery figurines found in early farming villages in Central Mexico. This was before the beginning of the great cities.

2. Toltec invaders, also called the "dog-people" became the rulers of the lake cities and the Valley of Mexico.

3. Toltec Statue. The Toltecs became civilized very quickly and learned to make temples and sculptured figures.

4. The Toltecs remembered and wrote down their own history. It was written in books that looked like the one in this picture.

5. Map of traders' routes, roads, mountains and forests. The Toltec traders went to very distant places, some of them probably reaching as far as Arizona.

6. Feathered Serpent. This was one of the gods of the Toltecs and represented one of their cultural heroes, Quetzalcoatl, (the feathered serpent). This god was supposed to have been an actual leader of the Toltecs.

7. The eagle and jaguar were also worshipped by the People of the Valley of Mexico. Later on the Aztecs had certain "orders" of warriors dedicated to the jaguar and the eagle.

8. A map of the city of the Aztecs on the island in the lake. The square with the temples and palaces is in the middle; the houses are all around.

10. Some of the Temples in the main square of the city.

11. A battle scene.

12. Example of a typical shield.

13. A list in one of the Aztec books of the tributes, (or taxes), that one of the conquered cities had to pay. This included food, clothing, and ornaments. The examples shown include an eagle warrior dress, a shield, and blankets.

14. Picture writing of the Aztecs.

15. Pottery figurine from the Valley of Mexico. Examples shown are the everyday clothing of the people.

16. Aztec stone mask, probably of a priest or ruler.

17. Another Aztec stone mask.

UNIT III - PEOPLE OF THE VALLEY OF MEXICO

Descriptions of Transparencies:

1. Houses and roofs from the Aztec Period as illustrated in an Aztec manuscript. The sharply sloped roof was made out of straw; the wall of sticks covered with mud. In the building with "eared" roofs, the roofs were made by laying rows of corn husks. The house construction was quite similar to that of the Mayas.

2. Shows the products of Aztec artifacts: these artifacts were very skillfully developed and specialized, each one producing a specific product.

   a) A horn made out of a conch shell.

   b) Spindle worls used in spinning cotton.

   c) Spears and a throwing stick.

   d) A necklace of shell.

   e) Wooden throne.

   f) A merchant carrying his wares on his head and his back with a "thump line"; a method of load-carrying similar to the Mayas and the Pimas of Arizona.

3. Left side: Illustration of an Aztec wedding. Bride and groom sit on a mat in an enclosed room. (Note that mats are used as an all-purpose furniture: beds; chairs; tables.) The wedding is symbolized by tying together the cloaks.

   Right side: Aztec cloaks with decorations. Cloaks, like mats, were

useful in many different ways: as blankets at night; as clothing during the day; as symbols of unity during a wedding. They were elaborately decorated.

4. Above: Grinding corn on a stone metate.

Making fire with a "firedrill"; a method used by other Indian tribes including the Pimas.

Catching fish, a very important activity in the cities around the lake.

Below: A ball game: the square-shaped enclosure represents the ball court. The two round shapes are the stone rings through which the ball has to pass in order to score a goal. The figures on each side are gods who preside over the game. The figure in the middle of the court is a sacrifice.

Ball games were also played by the Mayas and the Pimas.

5. Classes of people in Mexican society. There are two classes of warriors: 1) regular soldiers; 2) warriors that belonged to special orders. These orders were called the "eagle" and the "jaguar". Each order wore special costumes. There were two classes of leaders, small local leaders, and princes and rulers of cities. The more important the ruler, the bigger and fancier the headress decoration. Symbols next to their heads indicated the cities which they represented.
6. Circular stone calendar of the Aztecs.
7. Language map of Northwest Mexico and the United States. This shows that the Pimas and Aztecs and Toltecs were linguistically related; they all belonged to a language family called Uto-Aztecan. This language family includes Indian tribes all the way from the Ute tribes in Nevada to the Indians of the Valley of Mexico. The different

languages within this large language family share words and grammar; some languages are more similar to one another than others.

8. Language families and how they work. This shows how two langauges in the same language family are more similar to each other than languages from different language families.

9. Arizona, shows the relationship of the Pimas to the Apaches, Maricopas and Papagos.

10. Shows how irrigation increases the productivity of arid lands.

UNIT III - SOURCES

The American Heritage Book of Indians. Editor, Alvin M. Josephi, Jr., Simon & Shuster, New York, 1961.

Bleeker, Sonia. Aztec Indians of Mexico, William Morrow & Co., New York 1968.

Castletter, Edward F. and Willis H. Bell, Pima and Papago Indian Agriculture, University of New Mexico Press, Albuquerque, New Mexico, 1942.

The Epic of Man. Editors of Life, Time, Incorporated, New York, 1961.

Movie: The Aztecs, A. S. U. Film Library, Tempe, Arizona.

Radin, Paul. The Story of the American Indian, Liveright Publishing Corporation, New York, 1934.

Shaw, Emma Moore, Pima Legends, University of Arizona Press, Tucson, Arizona, 1961.

Slides: Unit III, Slides 1 through 17.

Stirling, Matthew W. Indians of the Americas, National Geographic Society, Washington, D. C. 1961.

Student Booklets. Units I, II, III.

Transparencies: Unit III, T1 through T-10.

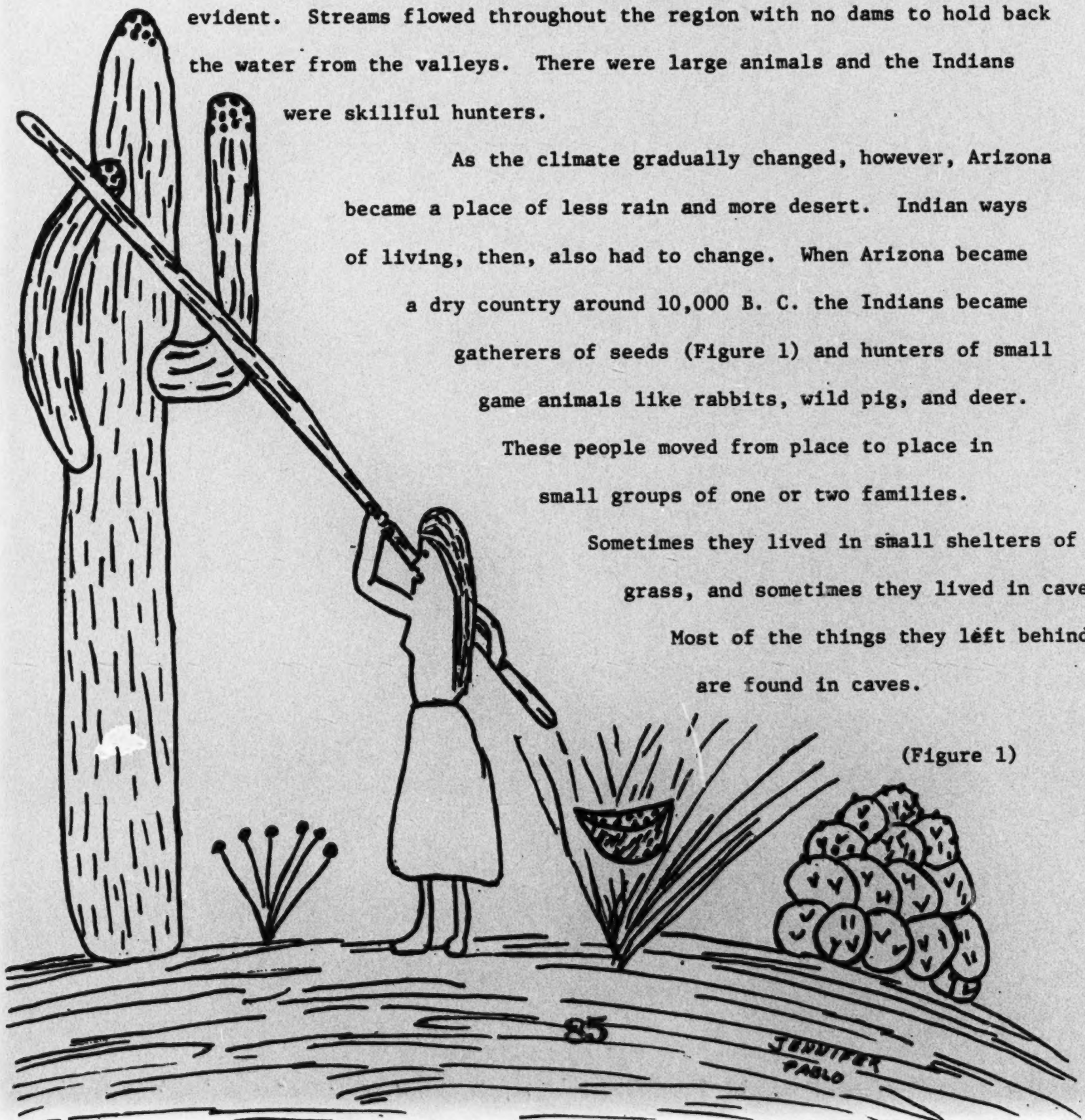
Underhill, Ruth. The Papago Indians and Their Relatives the Pimas. U. S. Department of Interior, B.I.A. Branch of Education, Washington, D.C., 1941.

Von Hagen, Victor W. The Sun Kingdom of the Aztecs, World Publishing Co. Cleveland and New YOrk, 1958.

THE HOHOKAM

Indians have lived in Southwestern United States from the earliest times. In this region, Indians developed a way of life that was, in part, special and different, yet somewhat similar to the ways of the Mayas and the Aztecs. Early Arizona was much different from the way it is today. It was a region with much grass and more rain than is now evident. Streams flowed throughout the region with no dams to hold back the water from the valleys. There were large animals and the Indians were skillful hunters.

As the climate gradually changed, however, Arizona became a place of less rain and more desert. Indian ways of living, then, also had to change. When Arizona became a dry country around 10,000 B. C. the Indians became gatherers of seeds (Figure 1) and hunters of small game animals like rabbits, wild pig, and deer. These people moved from place to place in small groups of one or two families. Sometimes they lived in small shelters of grass, and sometimes they lived in caves. Most of the things they left behind are found in caves.



(Figure 1)

Basket Makers

During this period, from around 4,000 B.C., the life of Arizona Indians was enriched by the cultivation of food plants, corn, squash and beans. As the cultivation of these plants spread throughout the Southwest, Indian life became more settled. Permanent homes appeared on the flat land where the soil was thick and good for growing plants. People had more material possessions such as baskets, pottery, grinding stones, nets for carrying and catching animals, mats for sleeping, stone pipes for smoking, and beads for decoration.

This period is called the basket-maker period because baskets of all sizes were found in caves, (Figure 2). For weapons the Basketmakers had bows and arrows, spears and spear throwers, and clubs. It seems that the basketmaker Indians were moving toward a more elaborate way of life. They had more food and were spending more time making beautiful things.

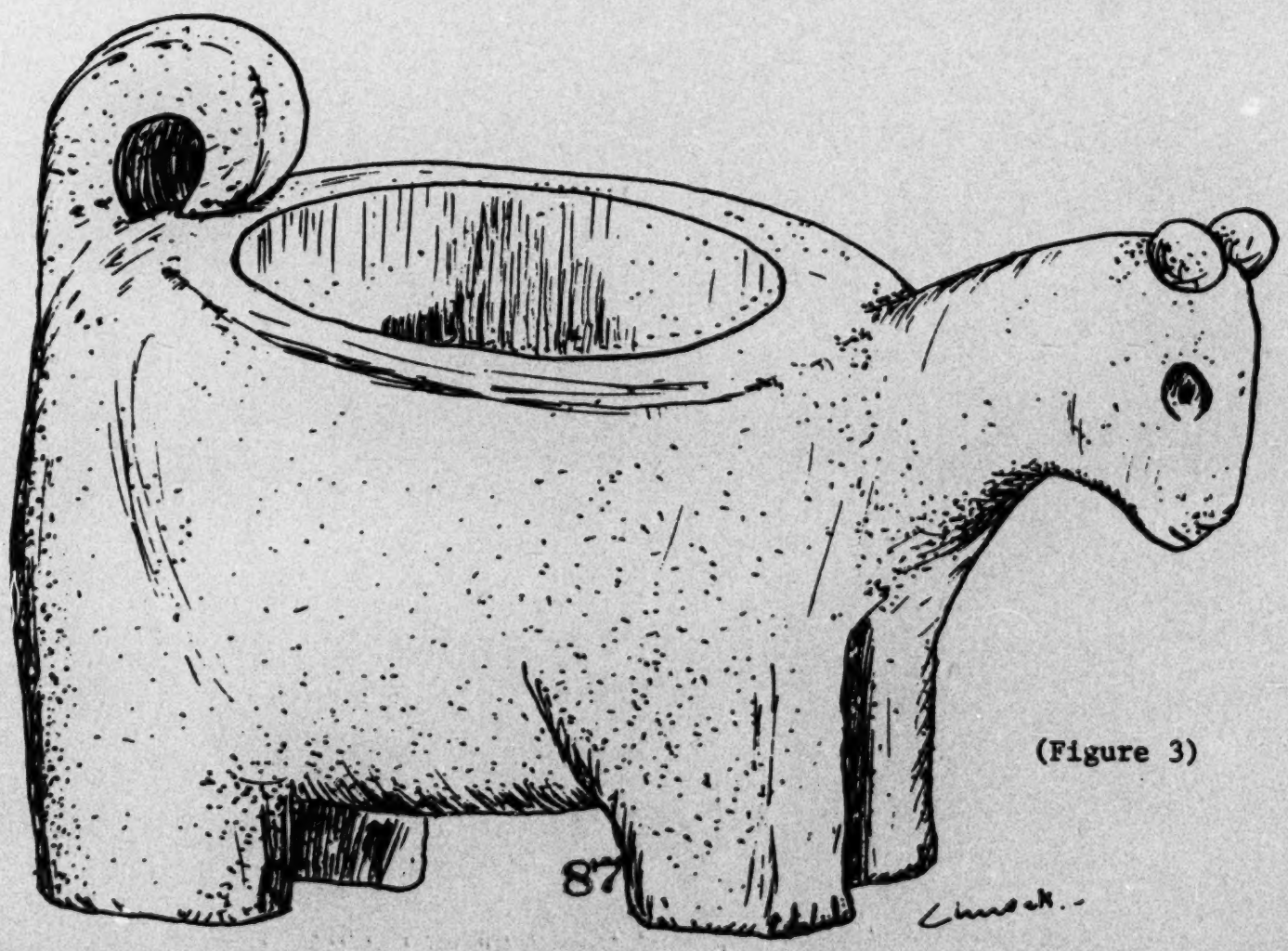
There are two famous caves where remains of these people have been found. One is Bat Cave in New Mexico; the other is Ventana cave in southern Arizona on the Papago Reservation. From the remains that are found in these caves it can be seen how the people's way of life changed little by

(Figure 2)

little. Kernels of corn were found in Bat Cave which were not wild corn. It was corn that had been domesticated around 4,000 B.C., but it was still very small and was similar to pop corn. From examples such as this much can be learned about Indian history.

The Hohokam

There are many different theories as to the origin and relationships of most Indian tribes in the United States. Some of the Southwestern tribes however, seem to have descended primarily from two groups: 1) the Anasazi in Northern Arizona, ancestors of most pueblo cultures; and 2) the Hohokam in Central and Southern Arizona. From the early Hohokam ("those who have gone"), we have many legends, much evidence of their pottery (Figure 3) and their skill in irrigation, but few actual facts as to their origin or their fate. It is fairly certain that the Pima and the Papago of today are descendents of either the Hohokams themselves,

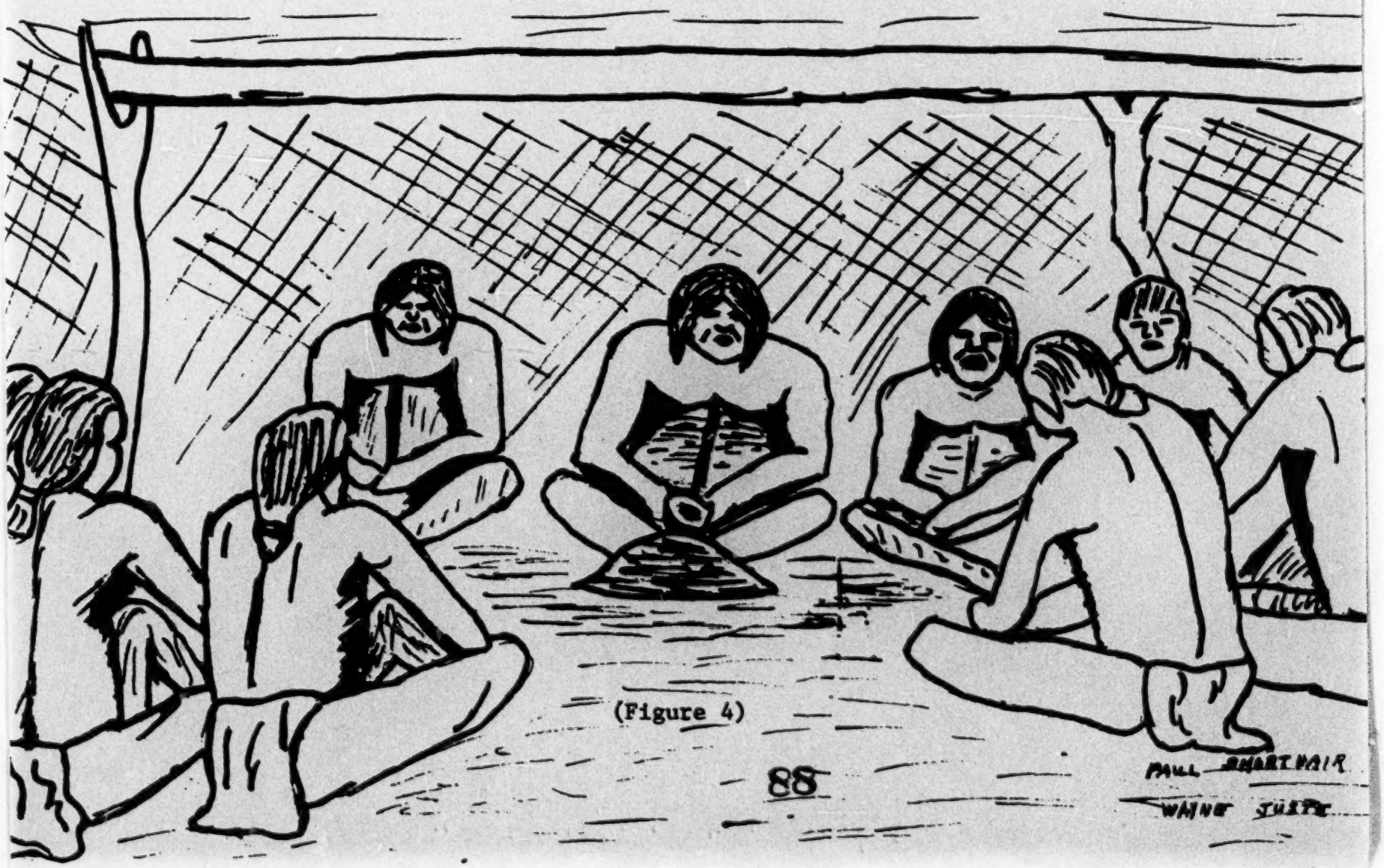


(Figure 3)

or of Indians who moved into the Hohokam land and mingled with or conquered them.

Some of the history of the Hohokams is available to us through excavations of their villages. They were a people of many talents, being skilled artists and excellent farmers. But they were perhaps most noted for a social organization that maintained a peaceful society without an obvious ruling class (Figure 4). By a good organization of cooperative living, they were able to create great works of engineering.

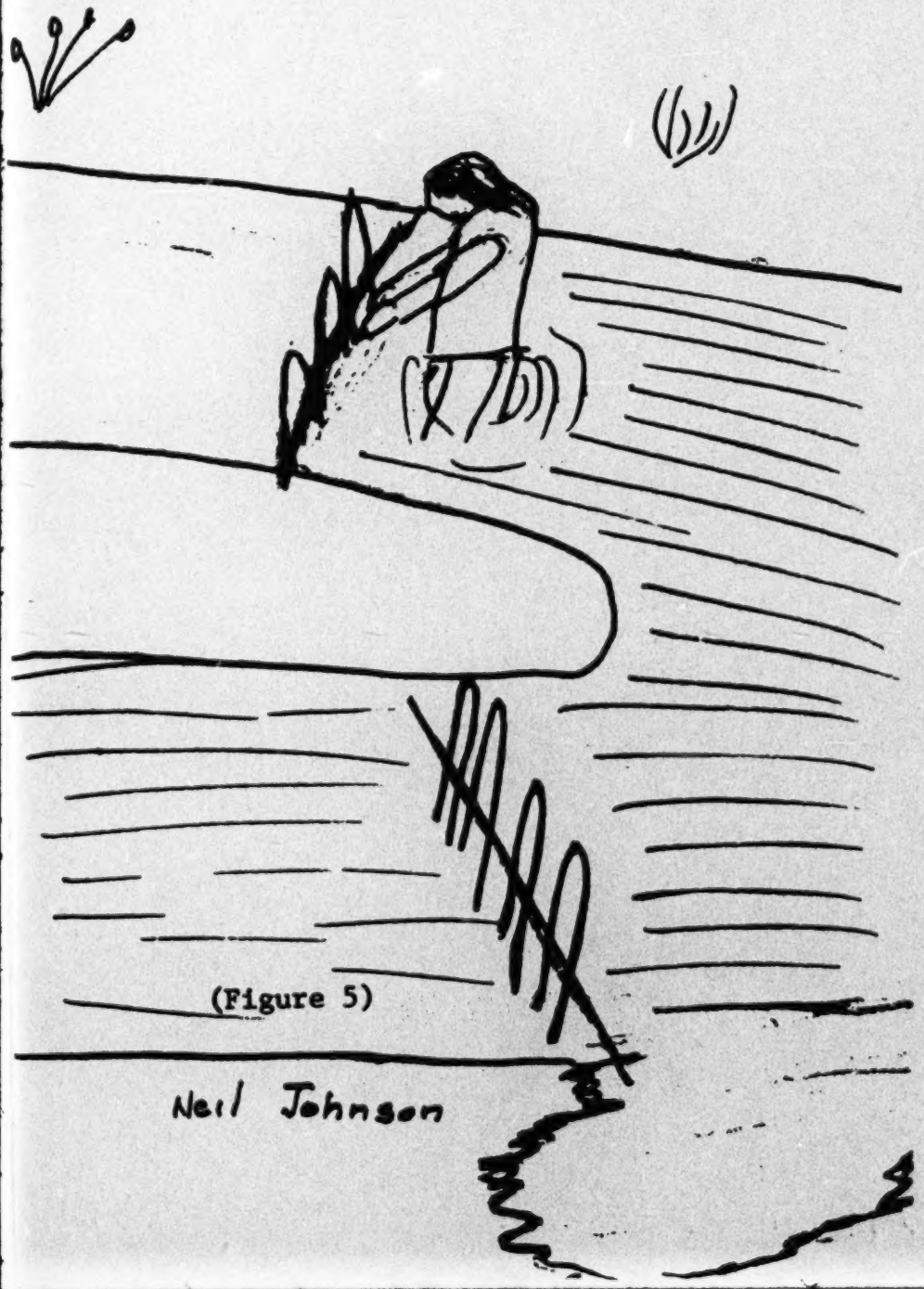
The Hohokam culture is generally divided into periods, identified by their creative work that has remained, particularly the pottery. These excavated ruins also show the living habits of these early people. The first period is called the "Pioneer" period, representing about five



(Figure 4)

or six hundred years, which is represented by Snaketown, Arizona. The Second period is called "Colonial" period, which, in addition to Snaketown, was represented by two other excavated areas, one near Roosevelt Lake and another east of Casa Grande. The next period, called the "Sedentary" period, represented the highest peak of Hohokam artistic and social development. This peak was followed by the "Classic period, during which time the Hohokams were joined by the Salado people who were pueblo people. There seemed to be little exchange of culture between the two, yet they lived in close relationship, peacefully.

The Hohokams may have been the first people to grow cotton. Their land was ideal for cotton, since the weather was warm and there was an abundant water source. The first villages of the Hohokams, therefore, were found by the rivers. Only broken pieces of pottery and stone remain of these villages, yet one can tell that many families lived there together. The families worked together, and learned to bring the water from the river to their fields by making canals. (Fig. 5). Like the people of the Valley of Mexico, the Hohokams were able to get better use of the water through a canal and irrigation



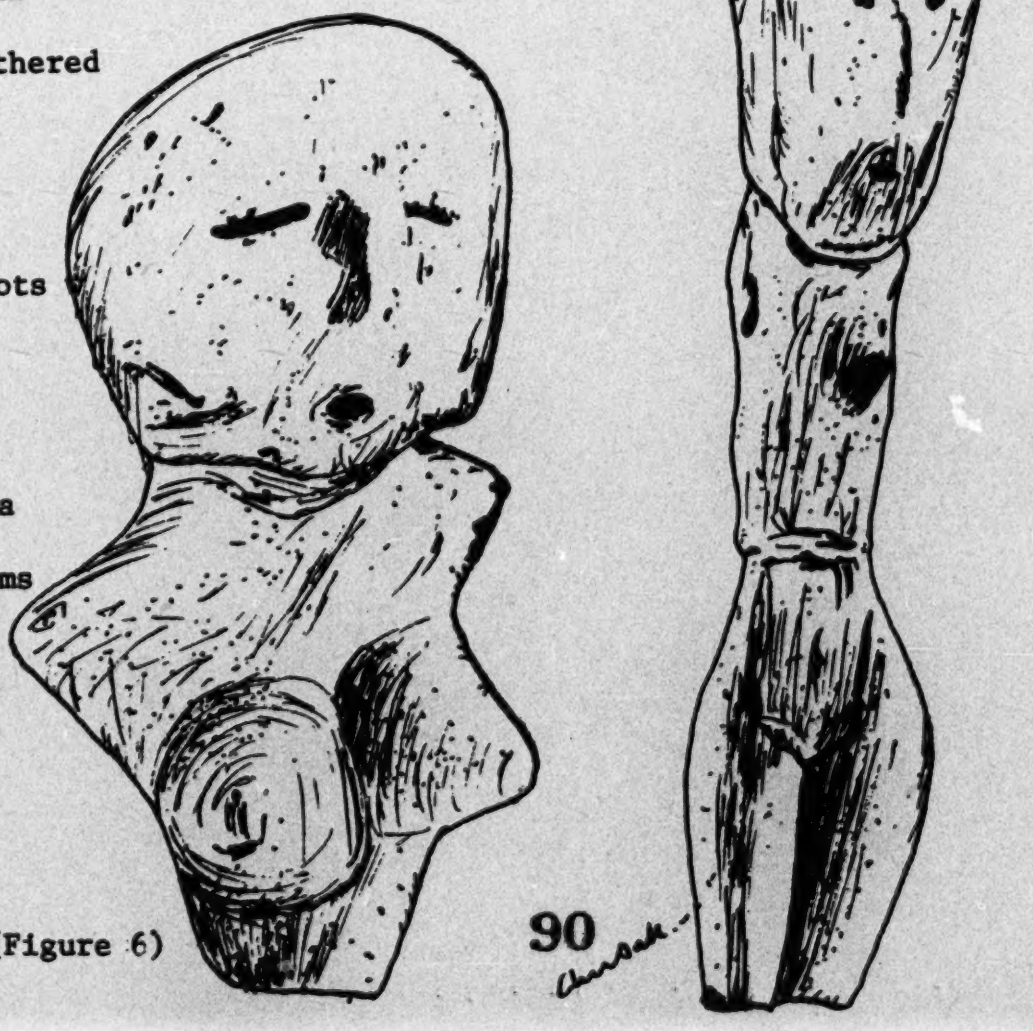
(Figure 5)

system. By the year 700 A. D. the canal system of the Hohokam was very large. Many fields were irrigated and the people became wealthy. Some of these people lived in small villages, others in the town called Snaketown.

Snaketown (Colonial Period - Sedentary)

Snaketown was one of the earliest of the large Hohokam communities. The town was surrounded by fields, irrigated by river water through a canal system. The people lived here all year around, which meant that they were able to grow enough food during the growing season to last the whole village throughout the year.

In Snaketown many relics were found similar to those of the People of the Valley of Mexico. Some pottery figurines were similar to those made by the earlier Mexican Indians. (Figure 6). Some of the pottery was decorated with snakes and birds resembling the "feathered serpent" of Mexico. Other animals found in the designs on pots were common desert animals like the horned toad and gila monster. Other items show clear evidence that there was some direct exchange of

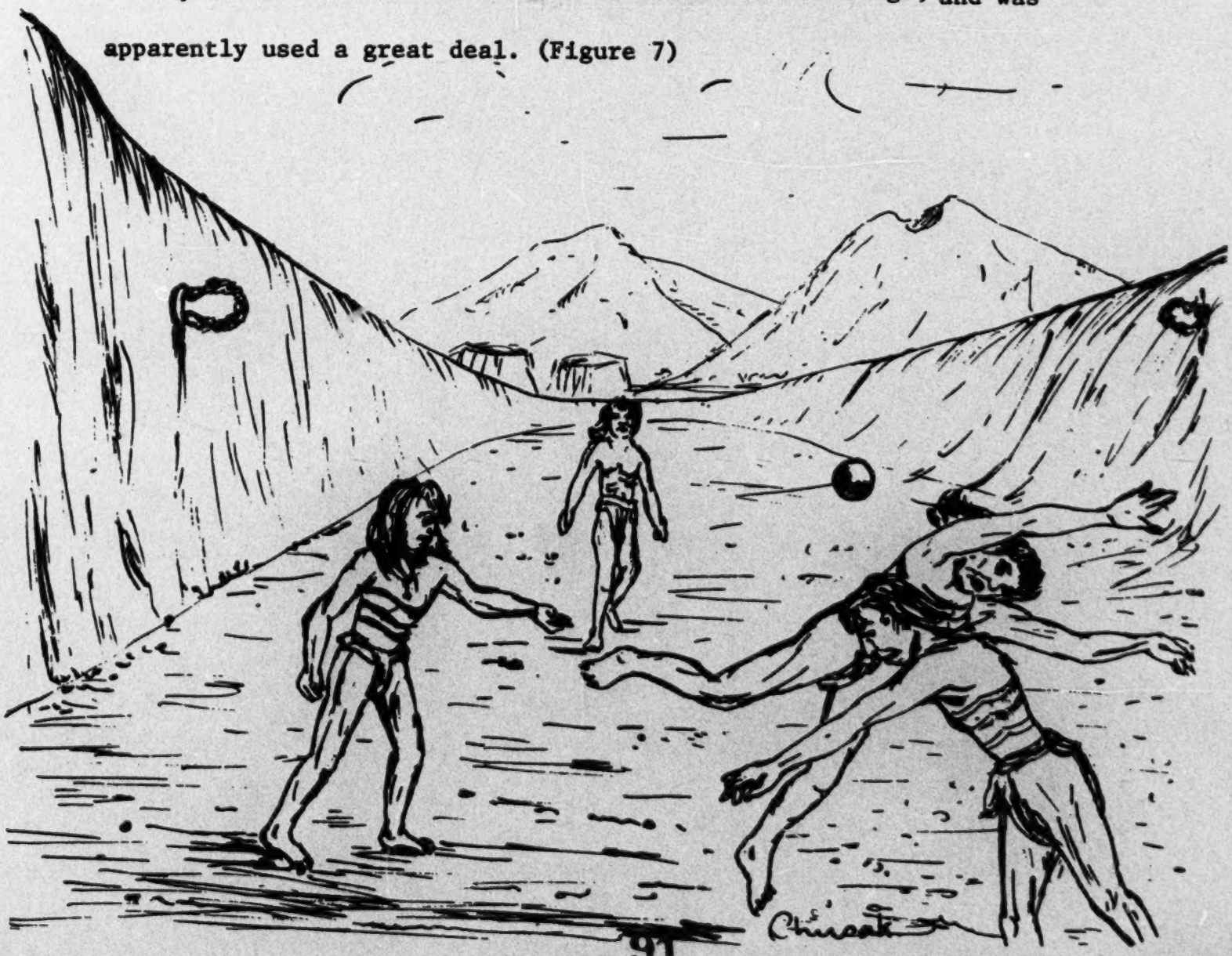


(Figure 6)

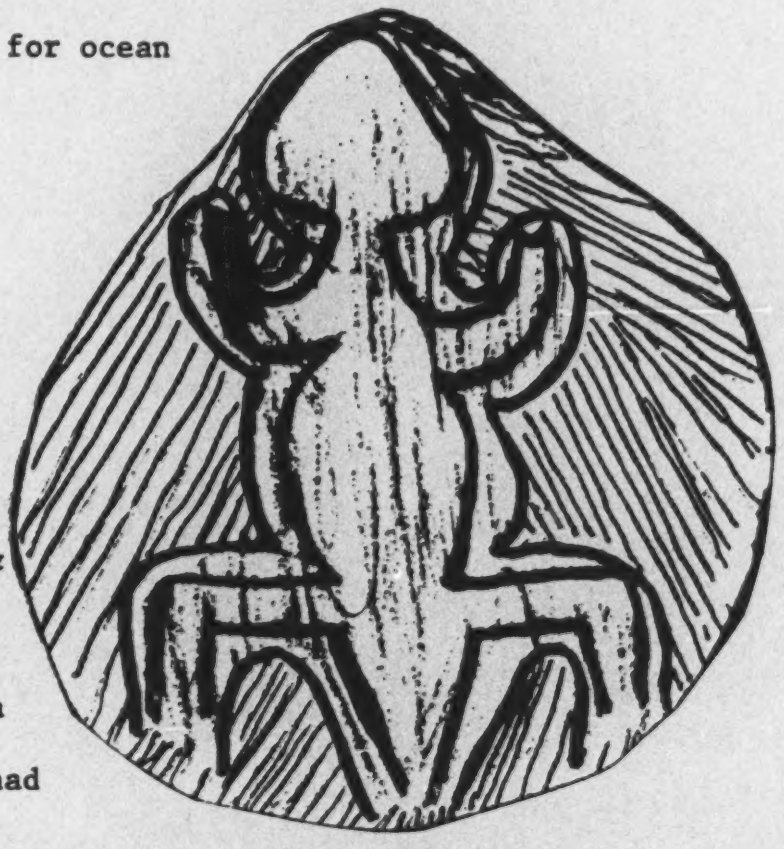
90

cultural ideas between Snaketown and the Indians from the Valley of Mexico. The Hohokams had copper bells that were tied around their feet as rattles when dancing. These probably came from Mexico since the Hohokams did not make such items. The mirror was another item that appears to have come from Mexico. These mirrors were decorated on the back with stones and were used by Hohokam women.

Houses at Snaketown were made of sticks and mud, and there were no large ornate homes for leaders. Chiefs and priests, among the Hohokams, lived in the same kind of houses as the rest of the people, though the gods may have had special houses. Mounds of dirt that were uncovered may possibly have been the bases for temples or pyramids. Ball courses at Snaketown also showed a great similarity to those of the Poeple of the Valley of Mexico. The ball court at Snaketown was large, and was apparently used a great deal. (Figure 7)



The most original artistic work of the Hohokams was their decoration of shells. The designs were made on the shell with a juice fermented from the fruit of the giant cactus. The juice contained so much acid that it burned the shell so that the design showed indented against the white of the shell (Figure 8). This cactus juice was similar to the wine-like drink that was made and used by the Hohokams. Shells were brought from the Gulf of California. The Hohokams as well as later Indian tribes from Arizona made the long trek to the Gulf for ocean salt.



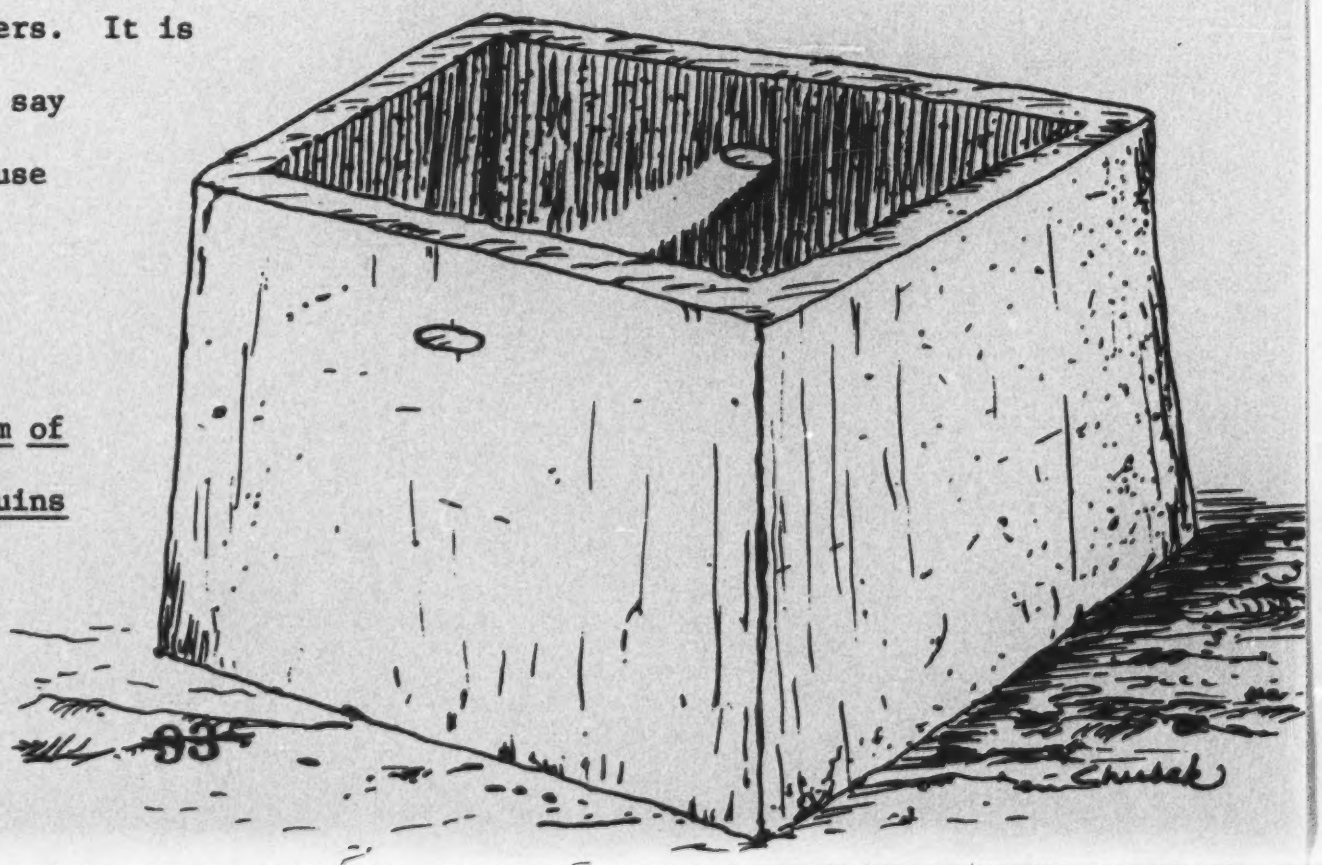
(Figure 8)

Casa Grande (Classic Period)

Around the year 1300 or 1400 A.D. a new people came into the valley of the Gila river. The Hohokams had always lived in small houses, but these new people, the Salados, possibly assisted in building the enormous Casa Grande, which still stands today. Casa Grande was a four story building. It had eleven rooms and was built of adobe. Surrounding the entire structure was a high wall, probably for protection against the enemy. Floors of the Casa Grande were made of logs that had been floated down the river for many miles. They were not made of local mesquite, but of juniper, pine and oak. There were also two ball courts at Casa Grande and a large compound with some old style Hohokam-type houses.

The Casa Grande structure is a good example of how old and new ideas can exist side by side. The area was rather like a small city, where there were many small houses and buildings for small families surrounding one large structure in the center of the town. The people kept the old style buildings for some family homes, yet were able to organize a complex four-story building, the Casa Grande.

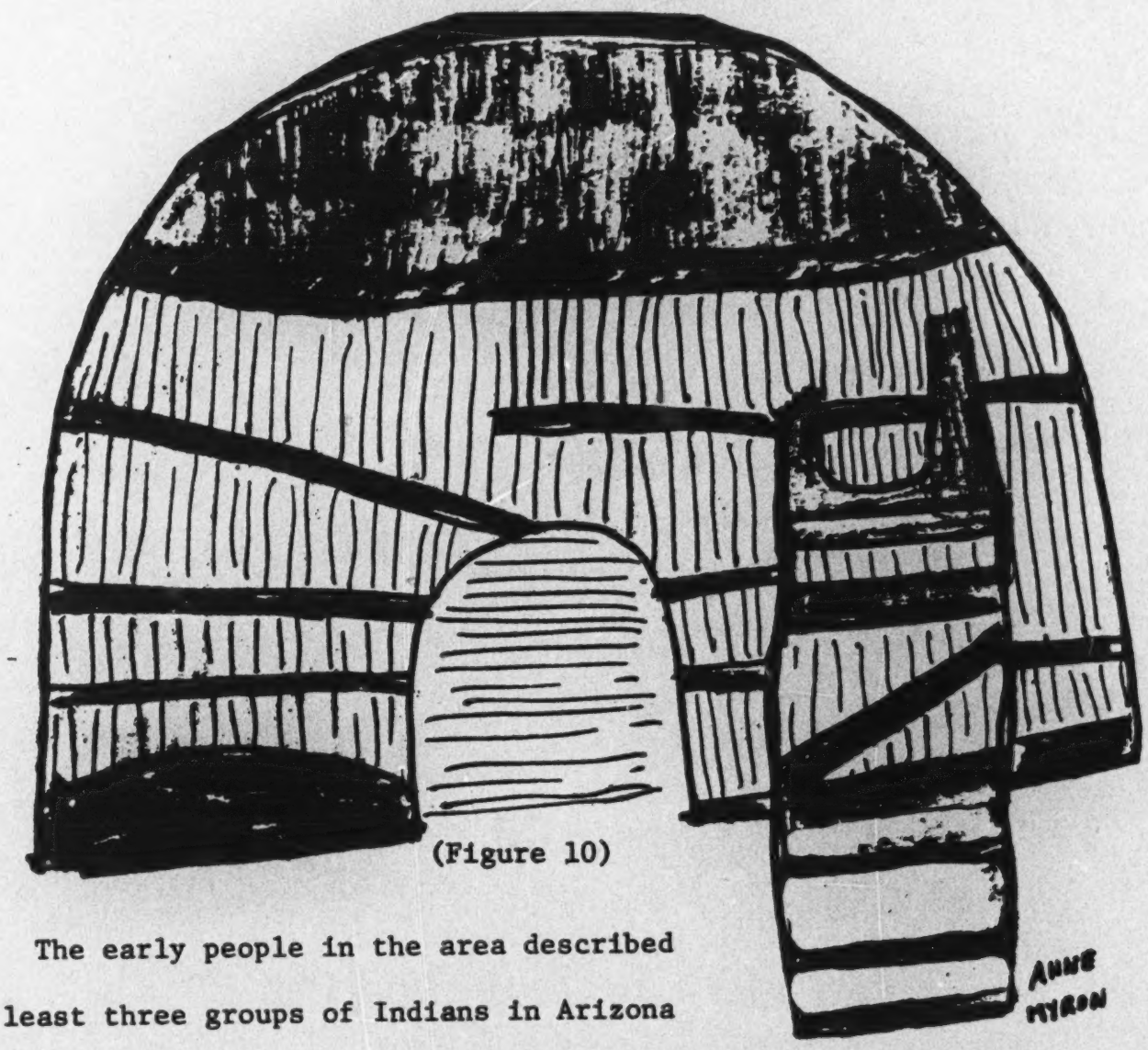
It is possible that Casa Grande was used as an astronomical observatory. This has been assumed because of some of the non-functional features of the building itself. For example, there was a hole in one of the walls of the Casa Grande and another hole in the wall on the other side. At the time of the spring equinox on March 21, the sun shines through one hole and out the other as in a solar observatory, thus marking the time that day and night are of equal lengths. (Figure 9) (The same phenomen occurs during the autumnal equinox.) It is known that the Indians began their planting season at this time, knowing the days would continue to grow longer. It has been guessed, therefore, that the purpose of the holes was to observe the movement of the earth, and that the people of Casa Grande (like the Mayas and the Aztecs), were good astronomers. It is impossible to say for sure because they left no writing.



Uppermost room of Casa Grande ruins (Figure 9)

The Early Pimas

Today in the Gila Valley, Indian people live on lands formerly inhabited by the Hohokam. These are the Pimas. The Pimas call themselves O'odham, the people. They have a tribal history just as the Mayas and the People of the Valley of Mexico have. Pima history, however, was not written; it was told by the old people to the young people and remembered in this way. This tribal history talks about the Hohokams and their cities and villages which the Pimas called "waa-ki", meaning "ancient house." (Fig. 10)



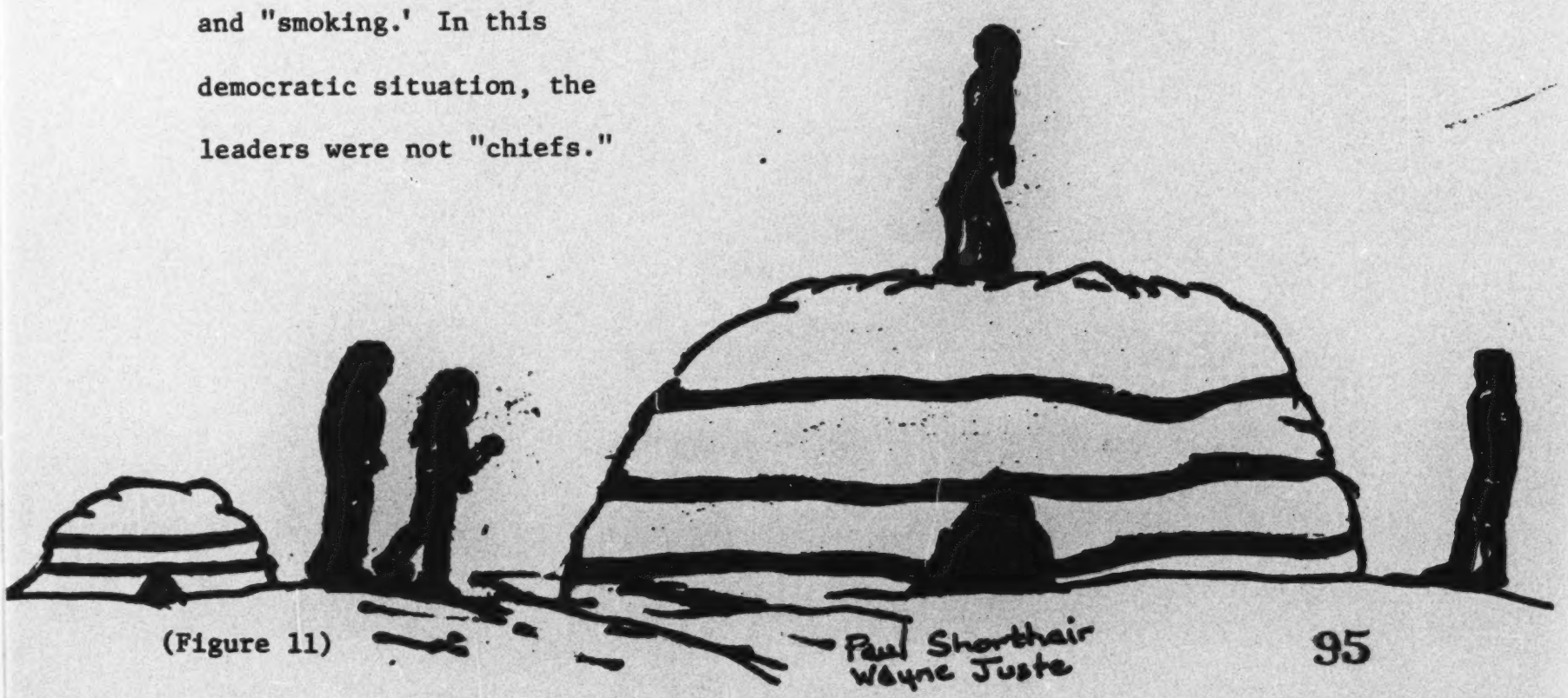
(Figure 10)

The early people in the area described at least three groups of Indians in Arizona who were called O'odham. These were the Pimas (river people), the Papagos (desert people) and the Sobaipuris. This latter group lived on the Santa Cruz and the San Pedro River.

They had many fights with Apache raiders and finally became absorbed into the other two groups. Pimas and Papagos have retained their identity until today. The early Pimas shared many things in common with the Hohokam. They lived in the same land, probably ate the same type of food, and used the same canals to water their fields. Many Pima fields are still in places where the early Hohokam fields had been.

Pima Government

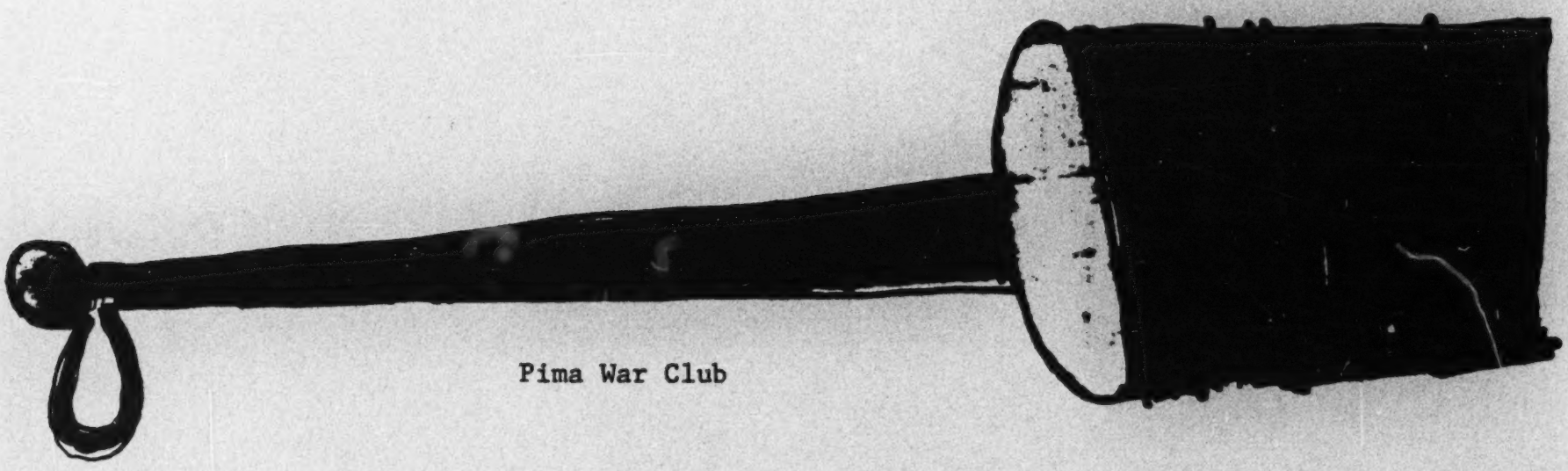
Little is known about the government of the Hohokams who preceded the Pimas or how much influence they might have exerted on the early Pima tribes. Unlike the Mayas and the People of the Valley of Mexico, however, the early Pimas were the only truly democratic tribe in method of government. The Pimas held council meetings where all the old men of the village got together and talked freely about the things that concerned them. All had to agree before a decision was made. There were one or two men who were "set above the others;" these were men who were fair and wise. These men would start the fire in the evening and call the people to the meeting. (Figure 11). Meetings took place around the fire and as they talked, the people smoked tobacco. For this reason the same word was used for "meeting" and "smoking.' In this democratic situation, the leaders were not "chiefs."



(Figure 11)

Their power was based on their moral authority and the respect in which they were held by other men. They had no power to make decisions alone, and no police to enforce any decisions. When the Spanish came, they called these people governors or chiefs and assumed they had more power than they had, since the Spanish were used to an "empire" government.

A few other men within the Pima group were set apart from the others. These were the medicine men who had special powers concerning the weather and sickness. These powers were supposed to be used only to help the people, however, and not to gain power or to order people to do particular things. A Pima who was a very good warrior was also considered to be somewhat set apart, and he would be the one to lead a war party or to make speeches before starting out on a war campaign. During times when the Apaches were raiding a great deal, many small villages grouped together for protection. In this way the warriors could keep a watch for enemies and the rest of the men could grow and harvest the food. Thus, the original reason for the Pimas to group into larger villages was the need for protection against the enemy.



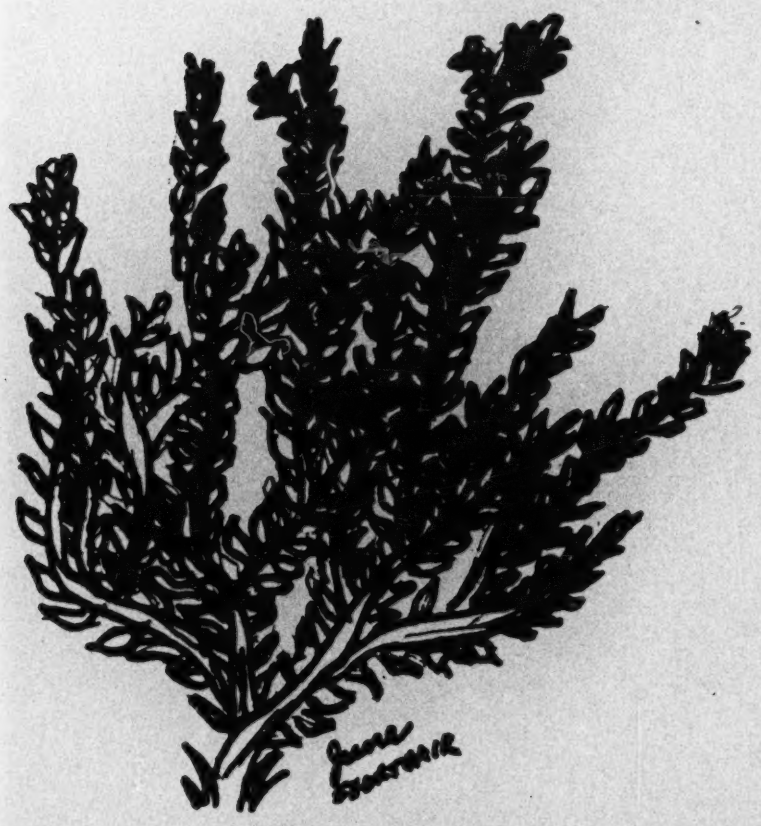
Pima War Club

In matters of government, therefore, it is notable that the Pima leaders differed greatly from the leaders of the Mexican tribes. The Pima leaders were chosen and respected for their skill and learning in the areas of war or counseling. They did not have power over others without full agreement. Mexican leaders were set up as leaders to be obeyed on fear of punishment or death.

Pima Ceremonies

Pima ceremonies show some similarity to the ceremonies of the Mayas and the People of the Valley of Mexico. The Pimas did not make human sacrifices to the gods, however, nor did they build temples or pyramids. Yet some similarity existed because the ceremonies were related to the powers of the earth. Rain for crops was important to all Indians as well as a plentiful supply of game. Ceremonies involving such things as crops and rain took place in most Indian cultures. The rain dance in August was one noted ceremony among the Pimas.

Pimas also had enemies and they were concerned with being strong themselves and making sure the enemies were weak. In order to be strong, the People of the Valley of Mexico fed their gods with human blood. The Pimas, on the other hand, believed their power came from the enemies they killed in battle. But the Pimas were also afraid of power and believed that power was dangerous. As soon as a man had killed an enemy, he would kill no more. He



blackened his face and stayed away from people until he could be purified. Killing was a serious thing to the Pimas.

Pima Games

Games were as important to the Pimas as they were to the Mayas and the Mexican Indians. Pimas gambled and raced against each other; villages also competed against other villages (Figure 12). Bets were placed on who would win. When races were to be held there were great preparations. The racers practiced a lot and the families prepared much food because it was a custom to give away food to families of the visiting villages. Races were more than just races; they were important occasions when people came together and renewed their friendship with one another. This was similar to the earlier Hohokam ball-court days, when games were an important occasion between villages, not merely a game of sport.

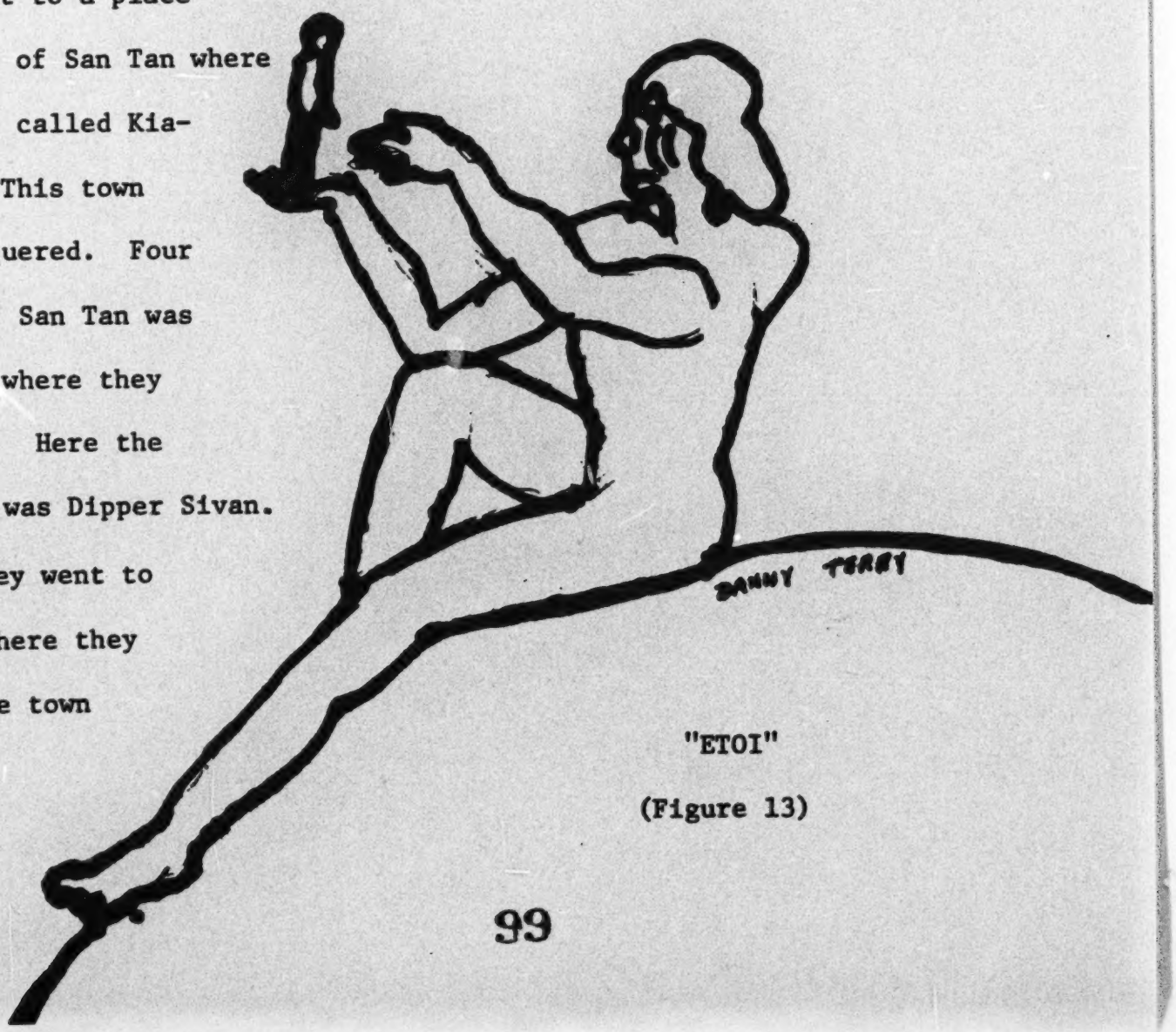
(Figure 12)

Pima Legend

The Pimas have many legends concerning the Hohokams and what happened to them. One of these legends involved "Elder Brother," whose name was "Etoi" (Figure 13).

The Hohokams lived on this side of the earth because Elder Brother had created them and put them here. But Elder Brother became angry with them, so he went to the other side of the Earth where he found another people, The Pimas. Elder Brother led these people through the earth and they emerged from a hole into the Gila Valley. Elder Brother led them and they began to fight the Hohokams. Legend tells how the people conquered one by one all of the villages of the Hohokams.

First the people went to Casa Grande Ruin where the chief was called Morning Blue Sivan. Here they fought and the Pimas conquered the Hohokam. Next they went to a place 18 miles west of San Tan where the chief was called Kia-atak Sivan. This town was also conquered. Four miles west of San Tan was another town where they again fought. Here the chief's name was Dipper Sivan. From here they went to Sweetwater where they conquered the town and its



"ETOI"

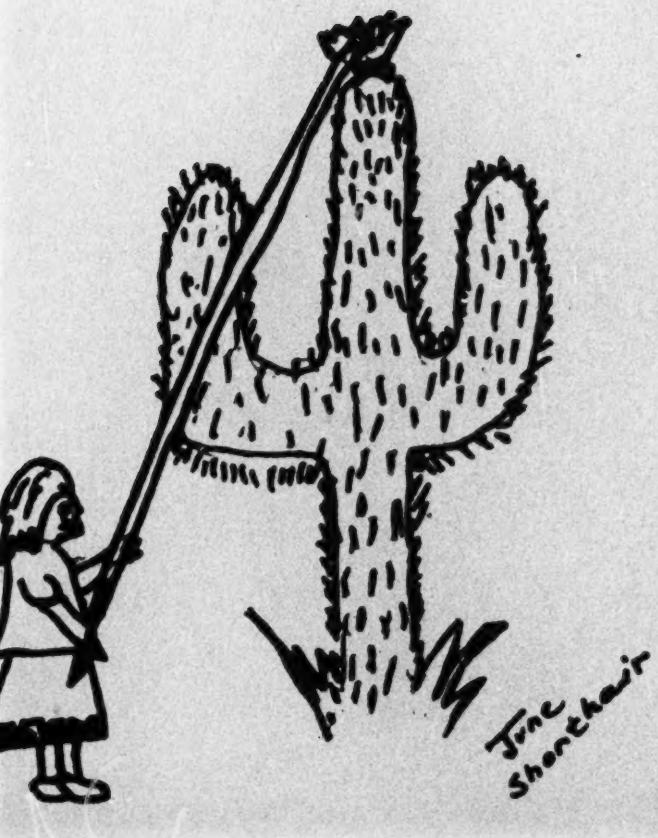
(Figure 13)

chief Flying Sivan. Casa Blanca was their next stop where chief Black Sinew Sivan and his people were defeated. The last fight took place at Gila Crossing where chief Lizard Sivan and his people became the last of the Hohokams to be conquered by the Pimas.

After this, each Pima group chose a spot to settle down and build houses, and they lived in the land peacefully from then on.

THE HOHOKAM

TEACHING UNIT



UNIT IV - - THE HOHOKAM

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Review Arizona Prehistory material on early gatherers in Unit one.	Arizona prehistory is typical of the desert gathering described in unit one.	Unit one.
Take students on a field trip to gather edible materials and to demonstrate why: 1) an early gathering band was on the move all the time. 2) much time was spend on food preparation.	Try to arrange the trip at a time of year when most fruits are in season. Point out to students that the available foods may be widely scattered, thus they take a long time to gather as well as to prepare for consumption. Have students label the plants they collect and list seasons they are available and methods of preparation.	Papago Indian Agriculture pg. 59-72 The Pima Indians, p.69-83.
Review with students how archeologists reconstruct the past from remains. EXAMPLE: Corn from Bat Cave	Discuss from what minute scraps of information archeologists can reconstruct the habits of the people. Discuss the origins of the corn and the date of Bat cave corn, 4,000 B.C. Reread with the students Unit one on the domestication of corn. When was corn first domesticated? Was there any wild corn in Arizona? Where is wild corn found? Bat cave corn may be the first evidence of contact between Mexico and Arizona.	
Draw a chart of contacts between Mexico and Arizona Indians, including the Hohokam.		
Discuss and review how changes are brought about by agriculture. EXAMPLE: The Basketmakers	Life becomes less nomadic when food sources are abundant. People spend less time obtaining food and more time providing additional comforts (better homes, clothes). More leisure time also provides for artistic and cultural advances. People live in larger groups; therefore there is more need for defense from enemies since there are more possessions. Their material goods increase because they are now a sedentary rather than "wandering" people.	Unit one and Unit two
Explain the three major agricultural traditions which came from the Basketmakers.	Anasazi, Hohokam, Mogollon.	
Anasazi	These people lived in the mountains of Arizona and developed the pueblo type of house. Both the Hopis and the Navahos adopted the Anasazi ways, though the Navajos came much later to the area from the North.	

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
Hohokam	Hohokams lived in the desert where warm houses were not necessary. Their houses were, therefore, much different from the pueblo type. They were noted for their adaptation of the desert environment through highly skilled methods of irrigation.	History of the Ancient Southwest
Mogollon	These people lived mostly in New Mexico and were skilled in agriculture. They were noted for their naturalistic pottery style which displayed many different animal designs.	
	Each of these three cultural traditions adapted to the geographic conditions of their respective environments.	
	Pimas are the heirs of the Hohokam cultural tradition, but it is not certain that they are the descendants of Hohokam people.	
	Some Pima histories deny this. Other tribes who live in Arizona took on some traits of Hohokam and Anasazi culture. The Maricopas learned in part from the Hohokam, the Supais and Yavapai from the Hopis (Anasazi).	
Discuss the relationship between the Hohokams and the People of the Valley of Mexico	Mexican traders, who were widely traveled, surely found their way to Arizona. There is evidence of their influence in Hohokam pottery. From this we can see that Hohokams played the same games and musical instruments as did the Mexican tribes.	
STUDENT PROJECTS: To avoid teaching Pimas directly about their own culture, ask students to carry out the following projects. Students might be divided into groups and assigned a project which can later be reported on, to the class and perhaps illustrated by transparencies of their own.		

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
PROJECT I: In what ways were the Hohokam similar to the People of the Valley of Mexico? Make a chart of the similarities and differences, and illustrate it.	In what ways were the Hohokam different? Find Arizona and the Valley of Mexico on a map. How far apart are they? Make some guesses as to how ideas could have been exchanged between two people so far apart. What kind of tribes live in between? On the basis of what you have learned can you make some guesses about how they adapted to their environment? What differences are shown between tribes who lived close to rivers and those who lived in deserts and mountains?	American Heritage Book of Indians, pp. 112, 122 123, paragraph 2 and 3. The Hohokam, pg. 274, 276, 277. Unit three and Unit four.
PROJECT II: Pottery decoration. Study the pottery designs of the Hohokam. How do these designs illustrate the customs of these people? Try to correlate, by chart and drawings, the designs with the customs. (If time permits, or for outside work, students could be encouraged to make their own pottery, using their own designs.)	Some designs in the pottery show people; some show activities connected with music or with work. Are any of these similar to the Pima culture? What other people carried loads on their heads besides the Pima? Which people had the most elaborate designs? Which people had more leisure time for artistic work? From the shapes of the pottery, can you suggest how they were used?	Excavation at Snaketown, Plate CLXVIII, CLXVIII, CLVIII The Papago Indians and Their Relatives the Pimas pg. 10 The People of the Crimson Evening, p. 54 American Heritage Book of Indians, p. 112 (Illustrations of Pottery)
PROJECT III Irrigation. Make a class presentation of the benefits derived from irrigation and the changes caused by irrigation on the culture of people. (A working model might be attempted.)	What people we have studied make use of irrigation? What type of climate is there in irrigated areas? Can one man alone build an irrigation system? How do people decide how to share the water? Do we need irrigation today? What areas in the Gila valley were green in the past, but are now dry because of water lack? Show them on the map. What would happen to Phoenix without irrigation?	Pima and Papago Indian Agriculture, Pg. 158 to 162. American Heritage Book of Indians, pg 111. column 2 Unit three. Unit Four
PROJECT IV. Houses. Compare Pima and Hohokam houses. Make illustrations and list contrasts and similarities. Present your findings to the class.	Do Pima houses resemble Hohokam houses more than they resemble Maya and Aztec houses? What kinds of materials were used in the old type Pima house? How do we know how Hohokam houses looked? How is Casa Grande different from other Hohokam houses? How is the difference explained?	Excavations at Snaketown pg. 90. Plates XV, XVI, XVII, XXI, XXIII, The Hohokam, pg. 687 People of the Crimson Evening, pg 14 - 19.

DIRECTIONS	EXAMPLES AND FACTUAL INFORMATION	SOURCES
PROJECT V. Games. Study and compare the games played by the Mayas, the People of the Valley of Mexico and the Hohokams. Arrange a ball game among students to illustrate how the games were played.	Find out as much as you can about the ball games played by these three peoples. How was the game played? In what way was the ball game more than just simply a game? What kind of ball games do Pimas play? How do these games differ from the old ones? Why do we say that the Pima ball game was an important social event as well as just a game?	American Heritage Book of Indians, pg. 45, 102, 103. The Hohokam, p. 673. Indians of the Americas, pg. 203, 256, 4th paragraph.
PROJECT VI Government Compare the government of the Pima tribe and the Aztec Empire. Present the class with an actual demonstration of how each type of government operated.	Pimas and Aztecs had different systems of government because their societies were of different sizes and complexities. What were the responsibilities of Pima and Aztec chiefs? How much power did they have? Explain in your demonstration the differences in responsibilities and powers.	The Papago Indians and Their Relatives the Pima, p. 31, 34. The American Heritage Book of Indians pp. 112 Second Paragraph, pg. 89-91. Unit three, pg. 3. Pima Legends pg. 8-14.
	Explain some of the similarities of tribal history between the Pimas and the Aztecs. Why were these histories similar? Both Aztecs and Pimas were late comers to their cultural area. Did this contribute to a similarity in tribal history?	Indians of the Americas, pg. 243-46, 258-63.

UNIT IV -- THE HOHOKAM

Description of Slides:

1,2,3,4. Pima Pottery. Note some designs, like the round dance and people standing, are somewhat reminiscent of Hohokam designs.

5,6. Pima shields were made of leather and decorated like those of the Aztecs.

7. War clubs.

8,9,10,11. Bows and arrows. Pimas used the bow and arrow, as did the Hohokam, Aztecs and most other tribes in Arizona.

12. Tobacco pouches made out of leather. Tobacco was very important in ceremonies and in healing. Pimas grew their own tobacco.

13. These are belts woven by Pimas. The Hohokam grew cotton as did the Pimas. The old men did the weaving.

14. Pima feathered headdress. Like Aztecs and Mayas, Pimas liked to paint their bodies and hair. Hohokams also practiced such decoration as shown on Transparency 3.

15. Pima Storage Basket. Since the Pimas were an agricultural people they needed large baskets for storage of crops.

16. Pima old style house, the round house.

17. Rock carvings on the Pima reservation. Their origin is unknown.

UNIT IV -- THE HOHOKAM

Description of Transparencies:

T1. Hohokam pottery designs of birds and dancing figures. Birds were often used as decoration motifs by the people of Mexico.

T2. Hohokam pottery designs inspired by the desert lizards, horned toad, deer or coyote.

T3. Hohokam designs of dancers, and old man leaning on stick. Note people with headdresses in the bottom picture.

T4. Ball court at Snaketown. Snaketown was excavated by the University of Arizona and later was covered with dirt to preserve the site until further, more complete recovery could be made of the ruins.

T5. This is a horned toad design etched on a shell. This type of etching with the fermented juice of the giant cactus, was invented and used only by the Hohokam. The shell came from the Gulf of California. The palettes in the bottom of the picture probably were used for make-up, and are similar to objects found in Mexico.

T6. Casa Grande. The plan underneath shows that besides the two-story structure there were a great many other buildings in the area. Most of the buildings shown are not houses, but ceremonial buildings. The place reminds one of the cities of the Mayas and the Valley of Mexico.

UNIT IV -- SOURCES

The American Heritage Book of Indians. Editor, Alvin M. Josephi, Jr., Simon & Shuster, New York, 1961

Castletter, Edward F. and Willis H. Bell, Pima and Papago Indian Agriculture, University of New Mexico Press, Albuquerque, New Mexico, 1942

Gladwin, Harold S. and Emil W. Haury, E. B. Sayles, and Nora Gladwin. Excavation at Snaketown. Reprinted for the Arizona State Museum for the University of Arizona Press, Tucson, Arizona, 1965

Gladwin, Harold Sterling. History of the Ancient Southwest, The Bond Wheelwright Company, Portland, Maine, 1957.

Haury, Emil. "The Hohokam", National Geographic Magazine, Washington D. C. May, 1967

_____. Ventana Cave Report, University of Arizona Press, Tucson, Arizona, 1950

Russel, Frank. The Pima Indians, 26th Annual Report of Bureau of American Ethnology, Washington Government Printing Office, Washington, D. C. 1908.

Shaw, Emma Moore, Pima Legends, University of Arizona Press, Tucson, Arizona 1961

Slides: Unit IV, 1 through 17.

Stirling, Matthew W. Indians of the Americas, National Geographic Society, Washington, D. C. 1961

Transparencies: Unit IV,T1 through T6

Underhill, Ruth. The Papago Indians and Their Relatives the Pimas. U. S. Department of Interior, B.I.A. Branch of Education, Washington, D.C. 1941

_____. The People of the Crimson Evening. U. S. Department of the Interior, Haskell Press, Lawrence, Kansas, 1941